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Economic Processes

THE LEVEL OF ECONOMIC ACTIVITY

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THE LEVEL OF ECONOMIC ACTIVITY

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PREFACE

This textbook provides an introduction to aggregate economics it is designed for use in one semester of a one year or one-quarter of a two-quarter elementary economics course Another volume *Economic Processes—The Composition of Economic Activity* has been prepared for use in the other semester or quarter The order in which the two volumes are used is not crucial each volume is an integrated unit.

A study of aggregate economics involves dealing with some of the most newsworthy of today s public issues unemployment inflation growth rates the public debt the stock market But the beginning student will readily find that economics is far from being simply a study of public policy issues The focus of the present text is on economic *processes*—the behavior patterns the transactions the financial relationships that constitute the operation of a modern economy Indeed the student who is excited about public issues may find the early chapters try his patience they develop the theoretical framework that makes possible explicit treatment of issues in later chapters

Any reader of this text who is also familiar with any of the other introductory economics textbooks will be struck by marked differences between them The unique characteristics of this text are the product of dissatisfaction with currently available textbooks during several years of teaching the introductory course at Syracuse University The most important ways in which this text is different seem to be these three

Integration This text is a thoroughly integrated one This means that the student should begin with Chapter 1 and read in sequence through Chapter 20 for the argument of Chapter 2 depends on that of Chapter 1 that of Chapter 3 depends on that of Chapter 2 and so on Individual chapters are not intended to stand as separate units instead they should be regarded as building blocks in an attempt to develop a broad understanding of how a complex modern economy works

This approach has several advantages over the common practice of introducing a series of more or less independent topics Each topic is more meaningful to the student when its relevance to the entire economy is comprehended Many of the topics forming quite independent units in other textbooks—business accounting for instance or the social security system—become links in the development of an over all picture of the functioning of an economic system, and are related usefully to the more basic topics such as national income theory The integrated approach hence permits a more intensive treatment of income theory, indeed, it could be said that income theory is the subject of the entire volume Perhaps most important experience with preliminary forms of this text indicates that it achieves its central purpose far more students actually learn and can intelligently handle concepts such as saving and investment, income, budget deficits money, and financial intermediation than when these concepts are treated in isolation from each other Moreover, they learn them not only as they relate to the theory of instability or growth, but also as they relate to how an economy operates on an everyday basis

This integrated approach has certain by products In order to maintain continuity from chapter to chapter, it has been found useful here and there to summarize the discussions of earlier chapters To a person who sat down and read the entire text in an evening or two some sections might seem annoyingly repetitive To the student reading over the course of a school semester or quarter, this repetition is vital Second, unlike other textbooks this volume is not designed in such a way that the instructor may freely alter the order in which the chapters are read nor is he encouraged to omit any of the chapters Third, the student is urged to do his reading currently with class lectures and discussions, large chunks of this text are probably indigestible when a first reading is attempted the day before an examination

Absence of mathematics Fundamental relationships are not presented in the forms of equations or graphs The absence of these does not imply a belief that they have no useful place in economics but only a belief that they are more often a hindrance than an aid in the introductory course Moreover, in the manner in which they are ordinarily employed (for example in the consumption function) they imply precise relationships where only rough ones exist Finally, they often distract the student, the successful student frequently appears to be the one who has mastered the construction and interpretation of graphs rather than the one who has gained insight into economic processes The instructor who finds them useful is free, of course to supplement the text with algebraic equations and/or diagrams in his class presentation

Considerable use is made, on the other hand, of simple balance sheets in showing numerical relationships As is always the case with balance sheets the relationships shown are of identity (the two sides are equal by definition) rather than of behavior

Finance The major integrating factor in this text is its primary emphasis on financial processes transactions instruments institutions and relationships It is often said that modern industrial societies are vulnerable to instability because they are modern money economies' This text is about money economies but that expression is not adequately descriptive of the importance to modern economic societies of a wide range of financial matters Money has its place (and an important one too) in this text but so do other man made financial institutions as well as important financial processes Indeed the essence of the study of aggregate economics is an examination of the relations among the four major sectors of the economy—the people as householders business government and the rest of the world And these relationships are essentially financial as that word is used here

The innovations made in this text are primarily pedagogical not theoretical The content of the text represents for the most part the product of the last thirty years progress in Anglo-American aggregate economics It is inevitable that some of the material covered be controversial both because some theoretical matters are still unresolved among economists and because policy questions inevitably involve value judgments In areas where no firm consensus exists among economists it has been thought best for this text not to be equivocal where there are two or more sides, the text most often clearly favors one, while giving space to the others No text is or probably should be free of its authors views on unresolved matters For instance, many texts show a direct link between monetary policy and aggregate income by means of an impact on investment of interest rate changes, even though the influence of interest rates on investment is uncertain at best. This text shows frank skepticism over the importance of interest rate changes Most economists who have accepted the heart of the "Keynesian" innovations of thirty years ago and the policy prescriptions that have since developed from them will find themselves generally at home with the economic attitudes reflected here though possibly disagreeing on certain points For whatever novelty in presentation is reflected here, this text is an orthodox one with respect to economics

The authors have profited from the advice and help of many people, none of whom may be held responsible, however, for any errors of fact or judgment contained in this text. In particular thanks are due to Professors Jesse V Burkhead Jerry Miner, James Price and Sidney C Sufrin all of Syracuse University, Professor Joseph S Berliner of Brandeis University, Professor David Laidler of the University of California, Professor Donald Joseph Reeb of the University of North Carolina, and to the late Mr Charles Winston In addition, special tribute is due to Mrs. Charlotte Cobb and, especially, Mrs Virginia Halsey, who typed the manuscript what must have seemed an endless number of times Finally, much is owed to nearly two thousand guinea pigs—undergraduate students at Syracuse University who tested this text by using it over a six year period at various stages in the process of its preparation

MAE

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1

THE STUDY OF ECONOMICS

All over the world people are working growing making, or moving things, helping or entertaining others or planning, directing, or coordinating the activities of other people All over the world people are seeking means to satisfy their human needs and wants acquiring and eating food, wearing clothes using material products enjoying shows or trips or using tools to make other products And all over the world people face the task of making choices regarding these efforts to sustain and improve life

These activities are commonly associated in many minds with the expression "economic activity" Yet there is no direct necessary link between making and using things and economic activity, and the study of economics may or may not be interested in such activities

Economics is not the science of making or growing things, you must study horticulture, chemistry, engineering or other similar disciplines for that kind of instruction Economics is not the art of organizing people to make or do things, the appropriate field of study is administration Practitioners in the making and doing of useful things are trained in schools of business, education, home economics, law, medicine, and journalism, in technical schools, or on the job, but not in departments of economics

Yet economists generally do become interested in what is done by those so trained Today a man does not ordinarily consume only what he himself produces a lawyer by virtue of his practice of law becomes entitled to products produced through the efforts of thousands or millions of persons in literally every corner of the globe He must depend on a complex and fragile system of economic exchanges for his very sustenance It is this system of exchanges a man made social institution that is the object of the study of economics

Economics is a *social* science It becomes concerned with the producing or consuming activities of people and their choice making behavior when these activities involve other people that is when there is an *exchange* or *trade* of some kind If a man living in isolation from other men grows corn harvests it and eats it no economic activity is involved If he grows the corn sells it and buys something else economic activity is involved

Economics then may be defined as the study of the activity of trading and of the informal or organized institutions through which trade takes place An *economy* is the geographical and cultural setting in which exchange is carried on Economists are especially interested in the social implications—the consequences for an entire economy—of trading activity

I THE ACTIVITY OF TRADING

If you ask most people why they work or hold financial instruments (stocks bonds savings accounts) they will probably tell you (before much thought) that they provide these services in order to earn money The real reason they do so (they will probably tell you after more thought) is to be able to get products produced through the services of others The ultimate objective is not money but the acquisition of products that satisfy needs and wants of various kinds

From the individual s point of view then economic activity consists of the systematic provision of services in exchange for products produced through services provided by others It was said above that economics studies trading activity the *fundamental* exchange involved is each person s provision of services in exchange for others services

Your service may be that of selling insurance or digging ditches or teaching kindergarten or writing advertising copy Or it may be the ownership of financial instruments such as bonds or bank accounts The income you thereby earn constitutes a claim on a variety of products produced by the ownership and labor services of others

For most people a large proportion of all activity comes under the heading of economic activity Usually at least one member of a family works for a living (or in the case of retired persons *have* worked and have accumulated claims on products) sometimes two or more work In a sense the individual household is the basic economic unit since the family as a whole takes the benefits gained in return for the services it (in aggregate) provides Few households indeed provide neither labor nor ownership services

What is a "product" and what is a "service' ? In this book these are important words and they are used in a particular way It might be said that services are what create products and products are what are created by services a service is what you *give* and a product is what you *get* in exchange You may give a piano concert and you would define that as a service but for others your piano concert may be a product to which their own services have entitled them In exchange for your concert services you may take some dental work—a product to you but a service from the point of view of the dentist and his helpers Or you may give services by helping to assemble automobiles (someone else s product) and take some product like food (the consequence of someone else s services) in exchange For an individual there is a clear distinction between services he provides and products he takes but for society as a whole the distinction disappears The total quantity of product produced in any given period is produced by the total quantity of services or put another way the amounts everyone pays for products in any given year must be equal to the amounts that everyone is paid as a consequence of the production of them

Not everything that you do for others can be called "economic activity " If you play the piano for a group of friends no economic activity is involved But if you play in a hall and the manager gives you a check when you are finished economic activity is involved The key test is this an activity is economic if as a consequence of performing it you are given a formal claim on the services of others If you visit a friend in a hospital, you may talk in such a friendly and cheerful way that his recovery is speeded up He is certainly the beneficiary of your action, but you are not thereby qualified to buy something at a store But if you are a psychiatrist and you call upon that same person in the hospital, and if your well-chosen words and professional demeanor directed toward that same patient have a therapeutic effect, you may as a result be able to leave the hospital, walk across the street, and pick up a new suit of clothes

II "ECONOMIZING"—A GOAL OF ECONOMICS

You are familiar with the expression "natural resources," which refers to those raw materials and energy sources provided to us by nature, such as mineral deposits, fertile soil, and waterways A more comprehensive and important term is *"resources,"* which in economics refers to anything exchangeable that can be used in the creation of products labor time, existing machines, buildings and other capital goods, land, natural resources, and an economy's accumulation of scientific and technical knowledge

It is of considerable importance how resources are used, for their use determines what the economy produces An hour of a worker's time can help build a car or paint a house Or it can be "used" in leisure Once used that hour of labor time cannot be used again That one hour of labor time may not be very important But the sum of all such hours certainly is, and even more so is the sum of all of an economy's resources All economies must have some means for determining how their resources are to be used, when those decisions are made, also determined are what will be produced and in what quantities, and who will be entitled to the product

No economy has unlimited resources, and hence all have a limited capacity to produce Economics has traditionally been called the study of the "allocation of scarce resources" Economists study the social and political systems that the economies of the world have used or may use to 'allocate" (determine the use of) their limited resources In the Western world, of course, most attention has focused on how a capitalist economy, without dominant central planning, makes such choices

Whatever their own ideological orientations are—socialist, liberal, conservative, and the like—most economists share one nonobjective bias They will agree that economies ought to "economize" This objective may be summarized as follows

1 The best economy is the most efficient economy, other things being equal Resources are not unlimited, and modern man does not yet know how to produce with limited resources sufficient product to satisfy everyone, completely and forever One aspect of economizing behavior is to determine how to produce as much as possible with the limited resources at the command of mankind

2 It is not enough to produce the maximum *quantity* of product with limited resources, without concern for *what* is produced Economizing also requires that the "right" products be produced, in the right proportions

The goals of economizing on scarce resources may seem obvious to you, but there have been times when other objectives have dominated economic inquiry Even when there is agreement on the goal of economizing there may be disagreement on precisely what is implied by that objective For instance, there may be disagreement on such questions as what are the "right" products, or who should determine which products are "right"

Resource Use and Finance

Note right away that economizing involves how an economy uses its resources, *not* how it "spends its money" An economy can use resources without spending money, it can spend money without using resources Money is one of the many man made institutions of *finance* that are employed in most economic systems, and which will be treated at length in later chapters Financial transactions often involve resource use, but they do not always Failure to distinguish between *resource* use and *financial transactions* is one of the major sources of error for beginning economics students For instance, both the following statements are true, but will seem contradictory to those who cannot distinguish the two

1 Government spending during World War II reached an all time high and about half of the money spent was raised by government borrowing—that is by the government s issuing bonds

2 But the ' burden" of the war was not thereby "passed on to the next generation," as was often argued Resources used to build battleships, plan invasions, or fight battles involved a contemporary burden during the war since those resources could not be used to create automobiles, chewing gum, or other consumer product—regardless of how the money was raised The generation that comes after a war may suffer as a result of physical destruction and human injury, but the explanation for the suffering would be the war and not the method of financing it Higher taxes during the war would not have resulted in more automobiles either during the war or after it

Similarly, these two statements are correct

1. If during a severe depression a corporation decides to build a new factory, it will cost the firm money, and it will have to get that money somewhere.

2. But the new factory will not "cost" the economy anything if the men and equipment used to build it would otherwise have been idle, since the economy as a whole gives up no other product in order to get the factory

An anecdote, perhaps apocryphal, coming out of World War II, underlines in another way the difference between resources and finances Rubber producing areas were under enemy control, and a severe rubber shortage existed while scientists worked feverishly to develop a practical synthetic rubber product One night a government warehouse full of rubber tires burned to the ground Newspaper reporters rushed the next morning to the office of the government official in charge

"Don't worry boys," he is said to have told them, "it was all insured "

III IS ECONOMICS A SCIENCE?

Disciplines are frequently classified according to whether they are "positive," concerned with what *is*, or "normative," concerned with what *ought to be* Economics has considerable "positive" or scientific content, but it has also often been, traditionally and historically, a normative discipline suggests the importance of ideals in these major stages in the evolution of Western economics

ANCIENT ECONOMICS From Biblical times through the medieval period economics hardly existed as a separate study Economic issues were raised but the value goals of early economists' were quite different from those listed above Theologians and philosophers did not ignore the problem of scarcity but neither did they make a consistent effort to understand economic efficiency instead inquiry was directed toward determining the kinds of economic activity that were most consistent with current concepts of justice purpose and order The result was that restraints were often placed frequently with moral overtones on types of economic activity—on buying and selling on borrowing and lending and on working and owning

MERCANTILISM The mercantilists of the Renaissance were among the first to make a systematic effort to determine how more product could befall a people whose resources were limited Most mercantilist writers were businessmen and they tried sometimes with success and sometimes erroneously to apply the principles they learned from the experiences of individual business firms to the economic activities of the nation as a whole Sometimes such principles apply for instance the economic definition of efficiency differs little from that of most businessmen But often such principles do not apply and one job of economists even today is to dispel the confusion involved in reasoning from the part to the whole For instance an individual or a business firm is wealthy if either has a lot of money for such money constitutes a claim on the services of others But for the economy as a whole prosperity cannot be gauged by the quantity of money held or periodically exchanged Another example comes out of the depression years it may be prudent for an individual or a firm to save a larger share of income but if everyone in the nation decides to save more the result might be a depression and a decline in everyone s savings

Mercantilism arose out of efforts of businessmen to convince the government (or ruler) to follow a certain set of policies just as medieval economics was largely an exhortation to people to follow a certain moral code in economic transactions Both were largely restrictive Medieval economics involved restraints on pricing on monopolistic activities and on the taking of interest Mercantilism involved restraints on trade both internal and external

CLASSICAL ECONOMICS The next phase in the development of economics was also somewhat connected with the formulation of policy rather than with purely disinterested scientific thought Centuries of medieval and mercantilistic economics had left Europe hampered by all kinds of restrictions on the fundamental economic activity of exchange In the eighteenth century the French economists called the Physiocrats and later in that century the celebrated Scot Adam Smith formulated syste matic economic theories in support of a liberal economic policy involving little or no government intervention or participation in exchange Smith's reasoning even though his *Wealth of Nations* was published as long ago as 1776 remains basic to modern economics

Smith was the founder of what has been called the classical school of economics his most important followers of the nineteenth century were Jean Baptiste Say, David Ricardo, and Thomas Robert Malthus While great differences may be found among the members of the classical school, a single spirit dominated their writings an economy functions best with a minimum of interferences with free competition on the part of government, monopoly or labor organization, since there exist logically demonstrable forces operating for maximum efficiency in an unregulated, competitive economy

NEOCLASSICAL ECONOMICS Sometimes the category of "classical" is expanded to include twentieth-century economists who, while discarding much of the theory of their nineteenth-century predecessors, continued their laissez faire spirit. This "neoclassical' school, including Alfred Marshall Leon Walras, and A C Pigou, continued to stress the merits of individual private, competitive enterprise

The classical and neoclassical theories assigned two important attributes to a competitive economy it was "efficient' in the sense described earlier getting maximum benefit from its scarce resources And it was invulnerable to depression since any forces tending to cause a decline would it was believed spontaneously bring opposing forces into play Since both results were believed to be achieved automatically, classical and neoclassical theories prescribed a laissez faire, 'hands-off" policy for government.

KEYNESIAN ECONOMICS The most recent major theoretical development in economics arose largely to counter the neoclassical view that government should do nothing about depression Taking the name of its founder the 'Keynesian" school demonstrated what is now widely accepted by almost all economists that while a freely competitive and unregulated economy may allocate scarce resources most efficiently, it cannot, without government intervention, cope with business cycles Keynes' *General Theory*[1] was the first major and widely accepted modern work to reject the classicists' 'natural harmony" theory of economics, and to provide a positive role for government.

Economists still debate whether they should maintain complete professional "objectivity" and avoid all contact with policy making, or should approach economics as a discipline whose objective is to determine how certain goals are to be accomplished Whichever view is right the fact remains that economics is in the sense described, a normative discipline, both in its history and its contemporary method

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[1] The full title *The General Theory of Employment, Interest, and Money* (London, Macmillan & Company, Ltd., 1936)

Economics as Positive

Since economics has been described as being often a normative discipline it is necessary to avoid confusing it with philosophy or ethics The fact that economics is concerned with the welfare of society does not necessarily mean that it is primarily concerned with value judgments Economists have developed theory and analysis concerning economic efficiency stability, and growth because they have been personally concerned about the welfare of society but that does not mean that the truth or validity of their analysis depends on a concern for the general welfare Instead there is an objective body of economic theory that is accepted by virtually all economists whatever their political and social orientation While there is normative content and motivation in economics, the bulk of the discipline's subject matter is positive, and economics qualifies as a science whose principal objective is the search for verifiable truth

Economic analysis bears on many of the most important public issues of our times—full employment, inflation, farm policy, taxation, depressed areas and industries labor management conflict, economic development, "automation" and conservation It is thus inevitable that the discipline should be at the heart of many public controversies, and that economists, whose own personal political and social views are diverse, should disagree with one another These disagreements tend to overshadow the important noncontroversial body of knowledge upon which virtually all economists agree

Actually, there is disagreement in all sciences All ideas must be subjected to debate and testing and hence dispute is a necessary ingredient of scholarship But scholarly disagreement becomes "public controversy" when the dispute concerns what *should be done* rather than *what is* This is why the age of the solar system is not thought to be "controversial" even though scientists are not agreed upon it while the debate over use of "live" versus "dead" polio vaccines qualifies as a true "public controversy"

In such disputes the line between value judgment and objective analysis *is never very clear When you are employed by a business firm* and need a basis upon which to make an administrative decision, there is little question as to what the goals are or who is to formulate them The question of value judgments does not often arise, for instance, between two accountants employed by the same firm, if there is a professional disagreement between them, it is most likely to involve accounting method per se rather than objectives But when an economist makes proposals for public policy, there is no specific set of criteria to guide him His proposals will reflect not only his understanding of how the economy functions but also his view of the proper objectives of his society Since different economists assume different objectives they arrive at different conclusions The disagreements among economists may involve conflicting views of objective facts but more often they involve different interpretations of what the objectives and priorities of society are or ought to be

There is a great deal to be learned about economic activity before matters of objectives become very relevant An exploration of the elements in the complex of economic activity is useful for a wide range of possible objectives Business cycle theory is useful even if you *like* depressions or inflation, and both capitalists and socialists can use the theory of resource allocation to "prove that they are right if you accept the objectives of each For now, you can set aside problems of decision making where objectives are of critical importance, while you familiarize yourself with some of the basic processes of economic life as they occur in the United States

The subject of psychiatry evolved, like economics, largely from normative considerations that people should lead healthier and happier lives, and that healthy and happy were in some broad sense subject to definition If you were preparing to be a psychiatrist, in the early stages you would study anatomy and physiology You would find that there is no agreement on precisely how people should behave or even what the objectives of behavior of an individual are But you would also find that there is a wide range of agreement on the basic processes of human life and on some forms of pathology In short, there is a tremendous volume of objective inquiry that is basic to psychiatry

There is also a great deal of objective inquiry that is basic to economics But the practice of psychiatry is more than just objective inquiry, and so is the practice of economics

Economists and Administrators

Administrators are concerned with organizing or regulating the trading activities of individuals and families They bring together people with different skills and training, assign tasks, check performances and so on The key expressions are "do this' or 'do it this way" Economists concern themselves with analyzing the effects of what administrators accomplish or might accomplish by their actions For economists the key words are "investigate" and 'explain" An administrator acting on behalf of the government might insure the mortgage loans of housebuyers, an economist would be more likely to investigate how this practice affects the number of houses built, the price of houses and the rates of pay for construction workers An administrator of a business firm would presumably make a decision on the basis of whether it would be likely to enhance the interests of the owners of the firm an economist would investigate whether the pursuit of self interest will also lead to the general welfare

Competent economists must know something of the forms of economic organization of marketing methods of accounting of the laws governing business and government organization and of other material that constitutes the core of business and public administration training But similarly a prospective business or public administrator to be competent should know something about what determines the level of national income and employment how inflation can come about what labor markets are like and whether the sales of a particular product are liable to increase or decline if international trade is encouraged

IV STUDYING ECONOMICS

While economics is a useful course of study for prospective business men it will hardly guarantee success You may think as many seem to, that a major reason for studying economics is to become wealthy (or at least to increase your income), and that the more economics you know the richer you will become

Before you accept that idea, you should observe that most professional economists are men of modest means A knowledge of how the exchange of services takes place in a complex system, why things are done the way they are done, and what would be the probable consequences of say, a different type of tax system may help you to increase your income, but it may also limit your income The more time and attention you devote to exploring the economic complex the less time you have for producing transporting and marketing commodities

The reverse is also true Just as economic understanding will not make you a successful businessman neither will business success necessarily make you a good economist On the contrary, the past holds many examples of mistakes made by policy makers when they assumed that good business principles could be applied to the economic society as a whole

But while economics probably will not make you rich, it may help you to understand the conditions surrounding you in both your economic role as a provider of services and in your simultaneous role as taker of product As an employee, how is your wage determined, and what would be liable to change it? What events in the economy can change the amount of product to which you are entitled even though your paycheck may show the same figures as before Or, why are you unemployed? Why do profits fluctuate more violently than wages? Would greater competition among your firm's suppliers mean more or less profit to you? If you raised the price of your product would you be likely to earn more or less profit? Where will new jobs come from for those men you laid off when you bought those new labor saving machines?

You may also be interested, from the viewpoints of both your capacities as service giver and product taker, in public policy What kinds of taxes are likely, for instance to increase the quantity of product at your disposal and what kinds to reduce that quantity? Should you take a stand with those who argue that a little less than full employment may be desirable if inflation can be stopped or should you line up with those who argue that full employment is the primary economic goal of society, and we should accept some inflation if necessary to accomplish that goal? Is the Soviet Union really growing at a faster rate than we are, and, if so, so what? And can we afford more missiles?

Adam Smith in the *Wealth of Nations,* emphasized the rewards of specialization and the division of labor A little reflection will tell you that as the economy grows in size, as specialization increases so must our dependency on exchange If you lived on a self sufficient farm, consuming everything you produce and producing everything you consume, your interest in economics would not be very great If you had to trade some of your product in order to receive a few products you could not yourself make (telephone or plumbing service, for instance), your interest in economics would be greatly enhanced If instead you participate in one isolated stage of the creation of one product (you drive a bus write television scripts, or paint automobiles) and trade that service for products created by thousands of hands and minds and moved to you through thousands of individual trading transactions then economics should command a good deal of your interest and attention Your interest should be especially keen if the conditions of your exchange of service for product are shaped by administrative decisions over which you have some control and for which you have some responsibility In this last named group are those who, as spokesmen for a business firm, a labor union or a government unit, may have to decide and explain why a particular tax should or should not be levied, why special consideration should or should not be given to small business, whether the proposed merger of two steel companies should or should not be permitted whether the tariff on watch movements should or should not be increased, or whether a labor union and a business firm should or should not be permitted to make a 'union shop" agreement It is obvious that a study of economics is essential to competence in such tasks

Handicaps, Pitfalls, and Hazards in Studying Economics

If you were beginning the study of electronics, nuclear physics, or geology, you would have a major learning job ahead of you, for there is a great deal of knowledge and analytical method to master in these disciplines But chances are you would have few preconceptions about what was true in these subjects and could start from scratch without having to "unlearn" misinformation picked up from newspapers, political orators, or the prejudiced views of acquaintances But when doctors try to prescribe a curative course of action for a sick patient one of their first jobs often is to dispel conflicting ideas of remedy based on superstition, rumor, or family tradition *Similarly perhaps the greatest handicap for the study of economics* is a heritage of informally acquired ideas some of which may hold some truth but many of which do conflict with accepted economic theory What makes it all the more difficult to part with such misinformation is that it often contains a small germ of truth, and frequently seems more plausible on first analysis than the complex theories of economists For instance

1 It is widely held that protection (via tariffs and the like) from foreign competition may increase the total pay in dollars and cents, going to American workers This may indeed be true But it is also true that the level of living of American workers is likely to decline at the same time

2 It is true that if you borrow some day you will have to pay back the loan plus interest you are exchanging tomorrow's services for today's product But it is not therefore true that when the Federal government borrows we are asking future generations to pay for product we take today

Some of the problems involved in thinking about economic matters stem from incomplete analysis from looking at only one side of a problem Consider the 'cost of living" Almost every month you read in the newspaper that the "cost of living" is at an all time high Such statements might give you the impression that people are less well off than they formerly were But earnings are also at an all time high You can acquire almost any product for less work today than at any time in the past In a very real sense, then you might say that the cost of living is at an all time *low* The "cost of living" as measured in prices is only half the story, the whole story is the "product of working"

Many people continue to commit the logical fallacy of the mercantilists by assuming that whatever is true of an individual firm or family is also therefore true for the economy as a whole This fallacy was put into our book of quotations by a well known executive who told us, "What is good for General Motors is good for America"

Consider these examples If one wheat farmer works hard and grows more wheat, his income might rise But if all wheat farmers do more work and grow more wheat all their incomes may fall On the other hand, if we assume that doing less work is the best policy for wheat farmers, can we also assume that if we all do less work, everyone will be richer?

If fewer watches were imported, American watchmakers would earn higher wages Does that mean that all American workers would be better off if fewer watches were imported? Or if less of *everything* were imported?

You have to be careful with reasoning the other way, too: if it is true for the whole, must it be true for each part? Some people used to argue that minimum wage laws and labor unions interfered with efficiency so much that *total national product was reduced. On this basis they argued,* "Don't organize into unions because you'll only make yourselves worse off." If the total product declines, does that mean everyone has less?

In economics you have to pay attention both to what happens to the whole and to what happens to the parts. Concentrating upon one at the expense of the other may mean nothing is well understood.

Finally, in economics you must exercise extreme care in the use of words. Everyday speech about economic matters seems frequently to incorporate into our very language popular misconceptions about economic activity. It is important not to use this language, natural as it may seem. For instance, you might say, "you have money in a savings account." An economist would tell you, however, that you have *either* money *or* a savings account. If you take money to a bank and get a savings account in exchange, you do not have money any more—you have a savings account. Nor would it be accurate to say that the bank has "your" money. It is no longer yours—you traded it for a savings account. The money belongs to the bank.

Economics students, before they begin to feel at home with the subject, sometimes complain about the "jargon" of the discipline. Every effort therefore has been made to keep the technical terminology in the following chapters to a minimum. But often the economic "jargon" is only part of the problem; just as often the obstacle is the misleading "jargon" of everyday speech.

2

THE CAST OF CHARACTERS

Economics deals with the social implications of trading activity especially as such activity influences the allocation of scarce resources Such a definition is sufficiently broad to cover virtually all subject matter studied by economists, and is sufficiently narrow to exclude almost all other subject matter. However, it does not adequately define the major *problems* subject to economic inquiry in the 1960s. The major questions in economics today are

1. What determines the total amount of *employment* in an economy, the economy's total annual *output*, and the total *income* going to those who provide services?
2. What determines how much of this total output will go to *expanding productive capacity*, and how much will be *consumed* by the people?
3. What are the sources of nationwide economic *instability*, such as recessions and inflation?
4. What determines the total amount of *money* used by an economy, and what significance does money have in the answers to the first three questions? And what is the role of other financial instruments—stocks, bonds, savings accounts, shares in mutual funds?
5. What determines the rate at which the economy *expands* its output, or its output per person, from year to year?

These first five questions are involved with what is known as *aggregate economics* or *macroeconomics*. This branch of economics is concerned with *total* amounts, such as aggregate employment, or total output, and with *average* amounts, such as the average level of prices.

Other important economic questions are

6 What determines the *use* of total employment—that is how many men will work on farms how many will work in factories and so on? What determines the *composition* of total output—that is how many ears of corn how many ball point pens and so on—in any given year?

7 What determines the distribution of total income?

8 What are the sources of instability not involving the whole economy? That is what explains the problems of distressed areas declining industries farm income?

9 *What are the processes through* which economic growth takes place? And what are the obstacles to such processes in currently under developed economies?

10 What determines our fortunes in international trade?

These last five questions are involved with what is known as *micro economics* This branch as contrasted with macroeconomics is concerned with structures not levels It deals with the composition of output not its total with the relative prices of different products not with the price level

This text is principally concerned with macroeconomics Another volume *Economic Processes The Composition of Economic Activity*, deals primarily with microeconomics The division of economic analysis into macro and microeconomics is very useful for analytic purposes but any practical problem or issue is virtually certain to involve both to varying degrees

The Aggregates and the Problem of Aggregation

Hence this text is concerned with the determination of and the significance of such aggregates as total employment total unemployment the rate of unemployment total income and output the average price level total savings and investment and total consumption

Obviously these are not homogeneous aggregates Total consumption for instance includes such things as the total number of oranges consumed the purchase of shoes and the purchase of new automobiles. Total employment includes day laborers factory employees supervisors managers doctors and the President of the United States. The ability to make reasonable statements about such diverse groups is obviously limited There is always a danger involved in bringing under a single heading members that *differ significantly from each other*

There is a less obvious danger in aggregation one which can be shown best by an example We know that with the graduated federal income tax the higher a man's income the higher the percentage of his income will be paid in tax Can we then conclude that if total income goes up a larger percentage will go in taxes to the federal government? Probably but not certainly At the same time total income goes up there may also be a redistribution of income, reducing the number of high incomes so that fewer people have to pay the highest rates What is true of the individual may be true of the aggregate, but it need not be

There are some advantages however, in aggregation It is considerably harder to predict the behavior of individuals than of large groups. Actuaries have no idea whether your house will burn down, but they could tell you with reasonable accuracy, *how many* houses will burn down each year Similarly, it is difficult to predict what share of a single individual's income will be saved, and what share spent, in a given year But economists can predict, with reasonable accuracy, what share of *total* income in the economy will be saved, and what share spent for consumption.

The Sectors

In aggregate economics, then, attention is not ordinarily focused on the behavior of the individual, the household, the firm, or even on single industries Instead, the cast of characters in macroeconomics consists of four principal groups or "sectors," and concern centers on their relations with each other

I. THE PEOPLE The first major group is "the people," also called "the households" or "the consumers " This sector comprises all the people in the economy Their economic roles consist of providing services to other sectors, and of taking product in exchange It is important to distinguish the people from other sectors, even where the individuals involved do not make the distinction For instance, a man may own his own business, operate it himself, use part of his earnings to feed, clothe, and maintain himself and his family, and part of his earnings to build the business further He is one of "the people " He provides services to the firm (his own), and receives income from the firm But he and the firm are not the same.

II. PRIVATE BUSINESS The business sector includes all privately owned organizations that buy services from the people and sell products—either to the people, to some other business or to one of the other sectors For the sake of completeness, certain organizations, such as churches and private universities, which are not "owned" in the same sense as businesses are, must be included under "private business "

III. GOVERNMENT UNITS The various levels of government might best be considered as an extension of the first sector, the people. When governments levy taxes and buy services from the people or products from business, it is said that the people are taking product collectively. But for a number of reasons, it is useful to consider government as a separate sector.

IV. THE REST OF THE WORLD Since the rest of the world—all other countries together—also provide services and products for us and take

American product it is necessary to include it in the the cast of characters It is most convenient to lump all other countries together in a single sector called the rest of the world

All four of these sectors deal with each other Governments tax businesses buy products from businesses provide products for the people The rest of the world borrows from the people, sells products to businesses receives grants from government units And so on Even with as few as four sectors the relationships became extremely complex All of these relationships are important indeed it can be said that the transactions of the four sectors with each other constitute the major subject matter of this volume

The immediate task at hand however, is a closer inspection of each of the sectors

I THE PEOPLE

The sector called the people consists of course of people, but the basic economic unit is probably not the individual person but the household In 1960 with a population of 181 million there were 52 million households in the United States A household consists of those living together in a single dwelling unit including single persons living alone

It is the household that makes the exchange that is fundamental to trading economies—it provides services in exchange for products Before turning however to a closer examination of the provision of services and the taking of product it is necessary to introduce the first important aggregate—population

One important statistic regarding population is its total The United States Constitution requires the federal government to conduct a census every ten years and these provide us with the best population information in the world Between censuses the Census Bureau makes extremely accu*rate estimates of population change (It is sometimes argued that the esti*mates are even more accurate than the actual censuses since fewer errors may be involved in the statistical estimation methods than in one by-one counting) Thus the last official census taken in 1960 gave the population as 180 670 000, but by July 1963 the population was estimated to have increased to 189 380 000 As Table 2 1 shows the 1970 population is predicted to be 214 2 million Estimates for 1980 and beyond have been made but they are less reliable

Another important statistic is the age composition of the population The most important change going on in the age composition of the population is the rapid increase of two groups—those of school age and persons over sixty five Together, these two groups constitute what might be called the nonproductive age group Few of their members provide labor services and together they probably provide little of the economy's ownership services. A relative increase in these age groupings implies that each productive person must support more other persons. Because of the breakdown in this century of the "extended" or multiple-generation family, more support for retired persons probably means more pension contributions, higher social security taxes, and higher general revenue taxes to support medical and other services for aged persons. The higher school age population means more taxes for school construction and teacher salaries, as well as a larger share of the family budget for child support.

In 1960 some 44.8 million persons, or approximately 25 percent of the population, were of school age between the ages of five and seventeen. Of course, those under five are also nonproductive, and many over seventeen still attend school. In 1960 the number of persons sixty-five and over was 15.8 million, or about 9 percent of the total. It is this latter group that is increasing at the fastest rate. Predictions are that by 1980 total population will have increased by roughly 50 percent over the 1950 figure, while the sixty-five and above group will have approximately doubled over the same thirty-year period.

TABLE 2.1

UNITED STATES POPULATION
1950–1960
AND ESTIMATES FOR 1970

Year	*Population in millions*	*Number Age 65 and Over*	*Percent Age 65 and Over*
1950	151.7	12.3	8.0
1951	154.4		
1952	157.0		
1953	159.6		
1954	162.4		
1955	165.3	14.1	8.4
1956	168.2		
1957	171.2		
1958	174.1		
1959	176.9		
1960	180.7	15.8	8.7
1970	214.2	20.0	9.3

SOURCE: Council of Economic Advisers, and *Statistical Abstract*, 1962.

SERVICES PROVIDED BY THE PEOPLE *There is one simple guide to* whether a particular activity of an individual constitutes the provision of a service—whether he is paid for what he does He may be paid in money (wages, dividends, and the like) He may be paid in the form of an increased value of some other type of financial instrument (such as when the firms in which he owns stock keep part of the profits or when the quarterly interest payment on his savings account is simply added to his balance) He may be paid ' in kind," as waiters are often paid partly in meals

There are two general kinds of productive services You can provide labor services," putting in time and giving up free leisure time and using your talents skill, training, and/or muscle Or you can provide ' ownership services," either as the owner of a firm (including a farm), or as the owner of such financial instruments as stock certificates, bonds and savings accounts

a *Labor services* Here the most important aggregates are the Civilian Labor Force, Employment and Unemployment The ' Civilian

TABLE 2 2

CIVILIAN LABOR FORCE EMPLOYMENT, AND UNEMPLOYMENT, 1950–1963

(*millions of persons*)

Year	*Civilian labor force*	*Unemployment*	*Employment*
1950	63 1	3 4	59 7
1951	62 9	2 1	60 8
1952	63 0	1 9	61 0
1953	63 8	1 9	61 9
1954	64 5	3 6	60 9
1955	65 8	2 9	62 9
1956	67 5	2 8	64 7
1957	67 9	2 9	65 0
1958	69 6	4 7	64 0
1959	69 4	3 8	65 6
1960*	70 6	3 9	66 7
1961*	71 6	4 8	66 8
1962*	71 8	4 0	67 8
1963*	73 0	4 2	68 8

* *Alaska and Hawaii included in 1960 and later years*

Note Detail may not add to total because of rounding

SOURCE U S Department of Labor *Employment and Earnings*

Labor Force includes all persons over fourteen not in institutions or in the armed services who have jobs or who are ready willing and able to work. In a sense it constitutes capacity employment. Employment at any given time lists the number actually working at all or on vacation sick leave, and the like Unemployment is the remainder of those in the labor force not classified as employed A housewife who has worked in the past but who is not currently seeking work is not regarded as unemployed A girl who has just graduated from high school and who has never held a job, would be regarded as unemployed if she were seeking work.

Table 2.2 shows the experience of the past decade with respect to the size of the labor force employment and unemployment. Comparison of Table 2.2 with Table 2.1 will show that population has been growing on the whole faster than has the labor force reflecting the relative increase in "nonproductive age groups.

Some other interesting facts are worth gleaning from the record For instance, between 1950 and 1951 the Civilian Labor Force declined but total employment *increased* as unemployment declined even more than did the labor force. Both the decline in the Civilian Labor Force and the decline in unemployment are due to the beginning of the Korean War Note also that in 1957 total employment increased over that of 1956 but so did total unemployment, the labor force increased faster than did employment. The year 1957 was the beginning of a severe recession, and while employment increased, there were not enough new jobs to take care of the natural growth of the labor force. Clearly, growth in employment alone is not necessarily a sign of economic health, it must be at least as great as the growth in the labor force.

What kinds of labor services do the people perform? Detailed information on employment by industry is available in the Department of Commerce's *Survey of Current Business* a monthly publication, and especially the annual national income issue. Table 2.3 includes a summary listing only The more detailed record shows, for instance, that the water transportation industry employed 117,000 persons in 1963 at an average annual wage for a full time employee of $7812 or that the "paper and allied products" industry employed 619,000 persons in the same year with average full time earnings of $6162

Most income does derive from labor services As Table 2.4 shows, roughly two thirds of all 1963 Personal Income[1] was received in the form of wages and salaries However, even more income than that derives from labor services. For instance, the $50.6 billion shown in Table 2.4 for "Proprietors' Income" includes *all* income single owners or partners re

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[1] Personal Income is a measure of all income payments going to people in a given year before taxes. A more precise definition of Personal Income and of several similar measures, appears in Chapter 7

TABLE 2 3

AVERAGE NUMBER OF FULL TIME AND PART TIME EMPLOYEES TOGETHER WITH AVERAGE ANNUAL EARNINGS PER FULL TIME EMPLOYEE FOR MAJOR INDUSTRIAL CATEGORIES 1963

Industrial category	*Thousands of employees*	*Average annual earnings*
Total	64 178	$5190
Agriculture forestry fisheries	1 986	1840
Mining	606	6267
Contract construction	2 943	6057
Manufacturing	16 585	5911
Wholesale and retail trade	12 813	4810
Finance insurance and real estate	2 945	5337
Transportation	2 482	6530
Communications and public utilities	1 448	6376
Services	10 054	4031
Government and government enterprises	12 312	5229

SOURCE Department of Commerce

ceived from their business ventures including remuneration for the owners' own labor services as well as their ownership services

b *Ownership Services* While Table 2 4 shows income derived from wages and salaries as about two thirds of Personal Income, it would be wrong to conclude that income from ownership service constitutes a full third of all income Instead it is estimated that income from this source ranges from one fifth to one sixth of total income. The reasons for the discrepancy are that as already noted much labor income is reported in Table 2 4 in other categories and part of the income shown there constitutes transfer payments (pensions and the like) which involve no concurrent service at all

Nonetheless one fifth or one sixth of total income is a significant portion and must somehow be explained and discussed Table 2 4 shows the types and amounts of ownership income received in 1963 Unfortunately it is extremely difficult to go further with ownership services at this point since even the concept of ownership service is not yet clear Labor service is a fairly concrete idea a certain number of people go to work,

TABLE 2.4

PERSONAL INCOME, 1963

(in billions of dollars and as percent of total)

Form of income	*Amount*	*Percent*	*Amount*	*Percent*
Wages and Salaries			312.1	67.3
Manufacturing	*98.0*	*21.1*		
Nonmanufacturing commodity production	25.3	5.5		
Distributive industries	80.3	17.3		
Service industries	49.3	10.6		
Government	59.2	12.8		
Other labor income			13.1	2.8
Proprietors' income			50.6	10.9
Business Professional	*37.6*	*8.1*		
Farm	13.0	2.8		
Rental (income of persons)			12.3	2.6
Dividends			18.0	3.9
Interest income of persons			33.0	7.1
Net transfer payments from government*			24.9	5.4
Total personal income			464.0	100.0

NOTE Detail may not add to totals because of rounding

* Old age and survivors' insurance benefits, state unemployment benefits, veterans benefits and the like less personal contributions for social insurance

SOURCE Department of Commerce

they work for certain employers, and receive compensation which it is reasonably easy to estimate But ownership services, in a *modern interdependent* economy, often involve complex financial arrangements, many of which will be discussed in later chapters Without the background of the later analysis of finance, it is difficult to introduce the owners as members of the cast of characters

There are a few points to be noted, however, and they are important ones.

1. It might at first seem possible for business firms to provide ownership services After all, do they not own things, often including an interest in other firms? But a little reflection will tell you that any business

firm that owns anything is in turn owned by people (or is owned by another firm that is owned by people—or is owned by another firm that is owned by still another firm that is owned by people, and so on) Ultimately, all ownership services are provided by people

Actually it would be impossible for a firm to provide ownership services Somehow a firm starting from scratch would have to get money to buy its machinery buildings stock certificates of other firms or other assets It would get some of the money from the organizers of the firm, they then would be providing ownership services It might also get money by borrowing, the lenders then would be providing some of the ownership services Later once the firm was established, it might use part of the profits to buy assets, but *profits belong to the owners* not to the firm itself A firm as you will see in the next chapter, is simply a form of organization of *people*—an institution created by people because they think they can produce more together than individually

2 Most ownership services are provided by people holding *financial instruments* (bonds shares of stock, and the like), rather than by people owning buildings machines, and so on The firms issue (sell) financial instruments to people, and use the money to buy things that will help them in production Thus there are two ways of looking at ownership service (1) you can look for the material things ultimately owned—buildings, machines houses and the like, and (2) you can look for the financial instruments held by the people

Unfortunately, it is not easy in practice to count either total material wealth or total financial wealth In some cases there is no actual financial instrument involved if you own a share of General Motors, you will have a piece of paper (a stock certificate) as evidence, but if you own a barber shop it is unlikely that you will own any 'instrument" showing your relationship to the firm Moreover, when total material wealth is counted, it is customary to count such things as people's houses and land, where, once again, no instrument is involved So despite the fact that financial and material wealth are ordinarily just two aspects of the same phenomenon, Table 2 5 indicates that the people own $956 2 billion worth of financial instruments while Table 2 6 shows the total material wealth of the United States to be estimated at $1730 billion (both as of 1959).

3 When the people provide ownership services, such as they might by buying a share of American Telephone and Telegraph Stock, a United States Savings Bond, or a bond issued by a foreign government they are establishing a relationship with another sector These relationships can become quite complex (you will see later how people can hold financial instruments *indirectly*, by owning an account at a bank or other financial intermediary), but they are also quite important, and will be discussed in some detail in later chapters

INCOME DISTRIBUTION What is the average income in the United States? This question has a number of different answers depending on what is meant by 'average income' In 1963 the *per capita* personal income (income per person—man woman or child) was $2443 Average *family* income before taxes was $7510 and after taxes was $6720 Or if by average income you mean the average annual earnings of a full time employee it was $5179[2]

Not everyone of course received the average income Table 2 7 shows the percentage distribution of family income Part A shows that after taxes the 20 percent of families with the least income received only 4 9 per cent of all after tax income while the 20 percent of families with the *largest income received 43 7 percent of after tax income Part B is to be* read as follows the lowest 20 percent of families received 4 9 percent of after tax income the lowest 40 percent (first and second quintiles) received 16 4 percent the lowest 60 percent received 33 2 percent and the lowest 80 percent received 56 3 percent Of course the lowest 100 percent that is all families received 100 percent of the income

Table 2 7 also shows the redistributive effect of the federal income tax For instance note that the highest quintile (20 percent) received 45 5 percent of all income before taxes and 43 7 percent of after tax income These figures make clear that the redistributive effect of the federal personal income tax is often greatly exaggerated (Moreover only the effect of the federal income tax is shown there are other taxes such as social security taxes and sales taxes that take more proportionately from lower income groups than higher income groups

While the per capita income in the United States was $2443 in 1963 *there are significant regional differences Per capita income in* Mississippi was the lowest in the nation at $1379 in Nevada highest in the nation (except for the District of Columbia), per capita income was $3372

Figure 2 1 shows how the fifty states per capita incomes compare with the United States average Note that Pennsylvania s per capita income is shown as 100 percent of the national average this means that per capita income in Pennsylvania was just about the same as that for the nation as a whole North Carolina on the other hand had a per capita income equal to only 74 percent of the national average or approximately one fourth less than that of Pennsylvania In general the map shows that per capita incomes are highest in the Northeast and Far West about average in the Great Lakes area and lowest in the Southeast

PRODUCT TAKEN BY THE PEOPLE Figure 2 2 shows graphically what product was taken by the people in exchange for their services in 1963 Note

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[2] These and other figures cited in this section are taken from the *Survey of Current Business* 44 4 (April 1964)

TABLE 2 7

PERCENTAGE FAMILY INCOME DISTRIBUTION BY QUINTILES 1962

A *SUCCESSIVE QUINTILES*

	Percent of family personal income	*Percent of tax liability*	*Percent of after tax income*
First quintile received	4 6	1 7	4 9
Second quintile received	10 9	6 3	11 5
Third quintile received	16 3	12 3	16 8
Fourth quintile received	22 7	18 8	23 1
Fifth quintile received	45 5	60 9	43 7
B *CUMULATIVE QUINTILES*			
Lowest 20% received	4 6	1 7	4 9
Lowest 40% received	15 5	8 0	16 4
Lowest 60% received	31 8	20 3	33 2
Lowest 80% received	54 5	39 1	56 3
Lowest 100 percent (all families)	100 0	100 0	100 0

SOURCE Department of Commerce

that by far the largest single expenditure was on groceries, taking $65 8 billion of total expenditures of $375 billion (approximately 18 percent)

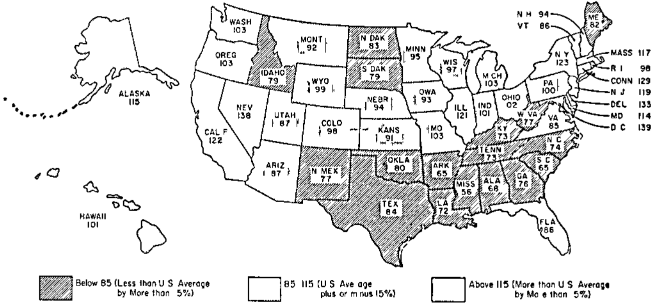
However, Figure 2 2 does not, it must be pointed out, show *everything* the people got in exchange for their services It shows only the product they *took individually* People also take product *collectively* through government Note that, for instance, *public* hospitals and schools are not included in Figure 2 2 under "medical and death expenses and ' private education and research" Moreover, the people also *save*, and acquire financial instruments instead of product in exchange for their services

II PRIVATE BUSINESS

The people provide services, it has been said, and get product in exchange Their services are ordinarily provided to and the products taken from, *organizations* of some kind, such organizations will be called production groups While there are a number of types of production groups, as will be described in the next chapter, by far the most important type is the *private business* organization Thus the fundamental economic exchanges

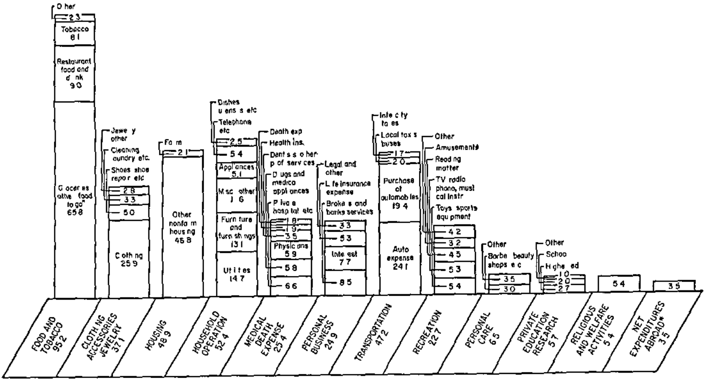
Figure 2 1

Per Capita Personal Income by State 1963, as Percent of U S Average



SOURCE Department of Commerce

Figure 2.2
How the People Spent $375 Billion in 1963



are the sale of services to business firms by households, and the sale of products by business firms to households

In introducing the business sector" and the remaining two sectors, less need be said than was said about the people For one thing, Chapter 3 has a good deal to say about private business Moreover, in discussing the people, a good hard look has already been taken at private business You have seen in detail the labor and ownership services purchased by private business from the people And you have seen in detail the products taken by the people from businesses

Before turning to a brief introduction of the members of the business sector a few definitions are appropriate Just as the household is the basic unit of the first sector, the *firm* is the basic unit of the second A firm is a single business organization, such as a corporation, or a single owner retail concern A firm may, like a major manufacturer, a branch bank, or a chain store have a number of *plants*, but it will still be a single firm All the firms producing the same or related products constitute an *industry* Thus we may talk of the Dearborn factory (plant) of the Ford Motor Company (firm) of the automobile industry

Of these terms, the most imprecise is the "industry" This is so because the expression "the same or related products" is itself imprecise Do we speak of the "electronics industry," or more narrowly of the "television receiver industry"? In practice, we do both

By the middle of 1962 there were 4 79 million firms doing business in the United States a ' business population" that seems in recent years to have grown at an average rate of about 100 000 firms each year (greater increases in prosperous years outweighing smaller increases or actual reductions in bad years) However, this growth does not occur merely by adding to existing firms at a regular rate Business firms fail daily, and new ones take their places daily A growth in the total number of business firms only means that more new firms were begun than old ones closed down (or merged with others) in any given period of time

In point of fact, economists find the "rate of business failure" to be one of the good statistical measures for forecasting recessions Business failures occur at a rate ranging from about 1000 per month in fairly good times to 1600 a month or more in bad times On the average, the business mortality rate is about 6 percent per year.

Although there are nearly 5 million business firms in the United States, they are far from being of equal size The vast majority are small firms, such as retail stores (a category that includes restaurants, beauty parlors, and the like, as well as drug and department stores) contractors, small local banks, and so on A few large firms, all corporations, dominate many industries In 1952 over half of the assets of all corporations were

TABLE 2 8

CONCENTRATION IN SELECTED INDUSTRIES 1958

	Number of firms in Industry	*Percent of value of Output originating in*	
		Four Largest Companies	*Eight largest Companies*
Motor vehicles parts	989	75	80
Blast furnaces and steel mills	148	53	70
Meat packing plants	2646	34	46
Aircraft	113	59	83
Paper and paperboard mills	375	21	34
Cigarettes	12	70	99+
Pharmaceutical preparations	1064	27	45
Tires and inner tubes	38	74	88
Plastics materials	273	40	56
Dresses unit price	4072	4	7
Tractors	109	69	90
Farm machinery (except tractors)	1238	38	47

SOURCE U S Bureau of the Census *Statistical Abstract of the United States*, 1962

held by the largest one tenth of 1 percent of all corporations[3] And in 1958 the 100 largest firms accounted for 29 8 percent of the assets of all industrial corporations Of the 100 firms' total assets 54 1 percent was held by the twenty largest firms and 22 7 percent by the four largest firms[4]

Table 2 8 shows the degree of concentration of twelve of the economy's most important industries in 1958 Note that an industry with many firms can still be concentrated, the motor vehicles and parts industry, for instance, had 989 but 75 percent of the business was done by the four largest firms By contrast the four largest dressmaking firms do only 5 percent of the business

[3] Joe S Bain *Industrial Organization* (New York John Wiley & Sons Inc., 1959)

[4] N R Collins and L E Preston "The Size Structure of the Largest Firms 1909–58 *American Economic Review* LI 5 (December 1961)

III GOVERNMENT UNITS

When the topic of the role of government in the creation and taking of product is raised, your thoughts probably turn first to the size and composition of "the budget." But to look at the federal budget, or even the budgets of the federal government, the fifty states, and the thousands of local governments, would give you a distorted idea of the role of government in economic life.

Budgets are administrative devices. The executive branch prepares them and the legislative branch enacts them. They include only the expenditures subject to some measure of administrative control. There is much government expenditure never included in the ordinary budget, and there is much expenditure included in the ordinary budget that is not involved with product taking by the government.

Total spending by government always exceeds the budgeted amount, because certain types of spending go on regardless of the year-to-year actions of administrators and legislators. For instance, beneficiaries of social security payments receive their payments when due, but neither social security taxes nor payments to beneficiaries are included in the federal budget. Toll bridge authorities and other more or less autonomous government units pay salaries of employees and make maintenance expenditures from their own income, and without year-to-year review by the parent government. In the calendar year 1963 total federal expenditures were $115.2 billion, in the fiscal year 1963 (which starts and ends six months earlier than the calendar year 1963 but which is roughly comparable), *budget* expenditures of the federal government were only $92.6 billion.[5]

But neither the budget expenditures of a government unit nor its total expenditures gives any idea of the total amount of *product* taken collectively by the people. For example, the federal government collects taxes and otherwise receives money from the people, and pays it back to the people in such forms as social security benefits, veterans' benefits, and farm subsidies. In these cases, no product is involved. The people as a whole have no less money than before, they can buy just as much as before. Such government expenditures, which are called *transfer payments* because they

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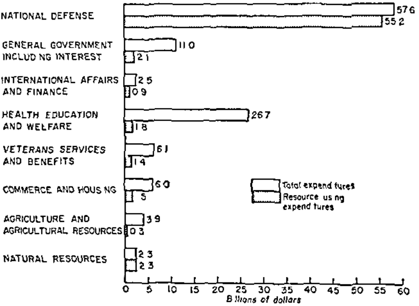
[5] *Actually total federal* government expenditures were even greater than $115.2 billion, and total state and local expenditures were greater than the figure reported below, $64.4 billion. A number of government units, like the Post Office or toll bridge authorities, sell product directly to other sectors for money. When these units do not earn enough revenue through sales to cover their expenditures, they must receive a *subsidy* from a federal, state, or local government, as the Post Office regularly does. The $115.2 billion figure only includes the subsidies to such enterprises, and not their total expenditures. When the government unit takes in more revenue than it spends, it has a *surplus*. In adding up total government expenditures, the Department of Commerce adds the total subsidies to government enterprises and subtracts the surpluses.

Figure 2.3

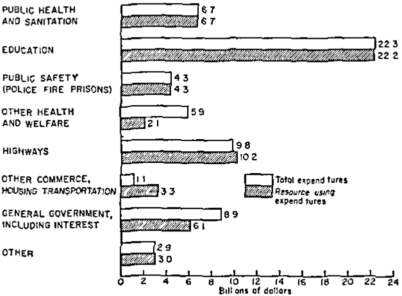


simply transfer income from person to person, do not reduce the ability of the people as a whole to take product.

A distinction is made, then, between *resource using* government expenditures, where the government buys a product or someone's services *in order to provide a product to the people collectively*, and *transfer payments* where no use of resources is involved. In 1963 when federal spending was $115.2 billion, federal resource using expenditures—that is product taken by the people collectively—was only $64.7 billion. A great deal of federal spending, then, *simply involves straight payments to persons* or to other sectors. Figure 2.3 shows what types of expenditures are made and how much of each type of expenditure involves resource use. Note that under Health, Education, and Welfare, total expenditures were $26.7 billion but only $1.8 billion involved resource use, the difference being *transfer payments*. Note that there is very little difference between total spending and resource using expenditure under National Defense.

An interesting sidelight is that when national defense items are

Figure 2 4



ignored product taken by the people collectively through the federal government was worth only about $10 billion

By contrast, total state and local expenditures were not very much different in 1963 from resource using state and local government expenditures, as shown in Figure 2 4 The only substantial transfer payments were interest on state and local debt, and state and local welfare (public assistance) expenditures[6] The difference between resource using expenditures and *total expenditures was only $4 billion*

The data in Figure 2 4 make clear that the most important state and local expenditures are for education, with highways a distant second, and public health and sanitation close behind in third place

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[6] Note that reported figures show that total expenditures for Highways and for *Other Commerce, Housing* and Transportation programs was actually less than resource using expenditures. This strange set of figures results from the fact that, as explained in footnote 5, there were surpluses or 'profits" in government enterprises in these categories such as toll highway authorities. Actual payments by state and local governments exceeded the amounts shown. As a whole, such state and local enterprises had a net surplus of about $2 8 billion.

Tables 2.9 and 2.10 show how government units raised the money to pay for $115.2 billion in federal expenditures and $62.0 billion in state and local expenditures in 1963. *Table 2.9 shows that by far the most* important revenue source for the federal government was the income tax. The personal income tax accounted for $57.7 billion in revenues and the corporate profits tax for $23.0 billion (both before refunds). Total receipts of the federal government amounted to only $113.7 billion, so it had a deficit of $1.5 billion in 1963, implying, as will be discussed in later chapters, that the federal government issued $1.5 billion worth of new securities during that calendar year.

State and local government units did not show such a clear dependence upon a single revenue source, mainly because taxes used differ from state to state. Some states employ personal income taxes, some sales taxes, and a few both. One state employs neither. Some states permit local governments to use sales taxes, a few permit local governments to use income taxes. But most localities rely heavily on property taxes as a revenue source.

One fairly important source of money for state and local governments is federal grants-in-aid: money raised through taxation or otherwise *by the federal government and given to state and local governments* (ordinarily on a matching basis of some kind) for specific purposes, such as urban renewal, public assistance, and highway and airport construction.

TABLE 2.9

FEDERAL GOVERNMENT RECEIPTS, BY SOURCE, 1963

(billions of dollars)

Total expenditures		115.2
Tax receipts		89.7
Personal income tax	57.7	
Estate and gift tax	2.3	
Corporate profits tax	23.0	
Excise taxes	13.8	
Other indirect business taxes	1.3	
Less Tax refunds	−6.0	
Social insurance contributions		23.0
Nontax revenue		0.9
Deficit		1.5

Note: Detail may not add to totals because of rounding.
Source: Department of Commerce.

TABLE 2 10

STATE AND LOCAL RECEIPTS, BY SOURCE, 1963

(billions of dollars)

Total expenditures		62 0
Tax receipts		45 8
Personal income tax	3 4	
Death and gift tax	0 6	
Motor vehicle licenses	1 8	
Property tax	21 0	
Sales tax	15 4	
Corporate profits tax	1 5	
Other taxes	4 1	
Social insurance contributions		3 9
Federal grant in-aid		9 1
Other nontax revenue		5 5
Surplus		2 4

Note Detail may not add to total because of rounding
SOURCE Department of Commerce

These grants in aid constitute a good reason why you cannot add the federal and state and local expenditures together to get ' total government spending" this $9 1 billion is included in both

IV THE REST OF THE WORLD

The rest of the world becomes in a sense a "sector" of the American economy because Americans take products produced by those in other countries and provide products for those in other countries The products involved may be material goods or ' merchandise' exports or imports, or they may be shipping services tourism and other intangibles Americans also provide and are provided with ownership services crossing national boundaries

There is no reason to expect that the product taken from the United States by the rest of the world will be, year in and year out precisely equal to the product taken by the United States from the rest of the world The difference if any gives rise to a financial relationship of some kind as will be explained in subsequent chapters

In 1963 the United States provided $31,106 million worth of product and services to the rest of the world Of this amount the largest part was in merchandise exports valued at $21,357 million Various U S intangible products were sold for $4463 million, and the United States

TABLE 2.11

U.S. MERCHANDISE IMPORTS AND EXPORTS BY TYPE OF COMMODITY MONTHLY AVERAGE 1963

(*millions of dollars*)

Merchandise exports			*Merchandise imports*		
Total		1,910.0	Total		1,417.8
Agricultural products total		465.4	Agricultural products total		334.8
Cotton	26.6		Cocoa products	11.3	
Fruits, veg.	37.2		Coffee	79.7	
Grains and preparations	192.7		Rubber, crude	16.4	
Packinghouse prod.	12.3		Sugar	50.9	
Tobacco goods	43.6		Wool and mohair unmfg.	18.8	
Nonagricultural products total		1,444.7	Nonagricultural products total		1,083.1
Automobile goods	125.7		Fur products	10.9	
Chemical goods	161.9		Iron and steel products	59.4	
Coal and related fuels	40.2		Other metals	48.1	
Iron & Steel gds.	57.4		Paper base stocks	30.1	
Machinery	453.4		Newsprint	57.3	
Petroleum	41.0		Petroleum goods	149.1	
Textiles and manufactures	57.8				

Note: Subtotals may not add to totals because of rounding. Detail will not add to subtotals because only principal commodities are included.

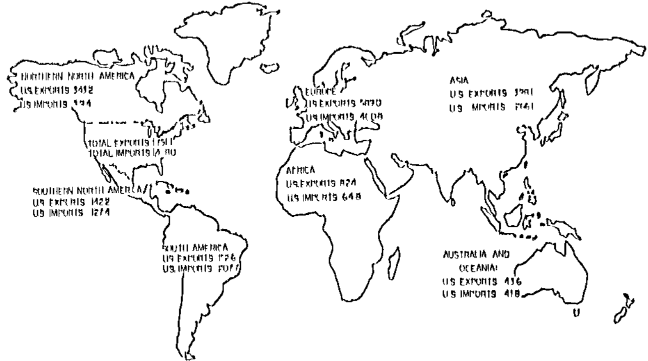
SOURCE: Department of Commerce

earned $4040 million on private foreign investments. That same year U.S. imports of products and services amounted to $25,831 million, of which $16,768 million, the largest share, was for merchandise. An additional $5275 million went for "intangibles," and $2907 million was spent abroad by U.S. military personnel.

Figure 2.5 and Table 2.11 tell a little more about the merchandise export and import category. Figure 2.5 shows the regions of the world with which our trade was greatest. For instance, our average monthly imports

Figure 2.5

U.S. Merchandise Imports and Exports by Region Monthly Average 1963
(millions of dollars)



Notes: Details may not add to totals because of rounding. Intangible products such as shipping services, are not included.
Source: Department of Commerce, *Business Cycle Developments*, May 1964

of merchandise in 1963 were $428 5 million, of this, $446 8 million was spent in North America, and another $400 8 was spent in Europe

It is interesting to note that most of our trade was with industrialized nations, not with the newly independent, underdeveloped countries Our most important trading partner in 1963 was Canada, from whom we imported at a monthly rate of $319 1 million, but second was Japan $124 8 million, third fourth, and fifth were the United Kingdom, $89 9, West Germany $83 6 and Venezuela, $78 1 Our exports show this pattern even more strikingly Of $1,934 0 million worth of product exported monthly in 1963, Figure 2 5 tells us that $589 0 million worth went to Europe, and $485 4 million worth went to North America An additional $141 5 million worth went to Japan

Table 2 11 indicates what types of products the United States imports and exports Our most important exports are machinery, chemical products and grain products Other than petroleum goods, our most important imports are shown to be a number of products that the United States cannot produce at all or can produce only with great difficulty, such as coffee, sugar, and various minerals

These, then, are the four sectors of our economy, and the cast of characters for a study of macroeconomics No student would be wise to proceed in a course in which they are the principal subject matter without at least becoming acquainted with them And a wealth of understanding of our economy can come from each new review of the basic data.

3

SERVICES, PRODUCTS, AND PRODUCTION GROUPS

Individuals and families perform productive services so that they may take the products created through the services of others So much was said in the first chapter, but it was also noted that the type of service performed often involves participating in one highly specialized stage in the production process You might help manufacture cars by sweeping floors in the office of executives who manage the coal mines that supply the coke for the furnaces of the steel mills that supply the steel for automobiles Or you might help produce television sets by typing letters for the broker who acts as an agent for the insurance company that insures a television manufacturer against fire Or you might be an attorney, with a one man business

Getting product to the public is a highly complex and involved business For any given final product it may involve many industries many firms within each industry, many stages within each firm

"Product"

When a person works for a living the product he expects to take in exchange for his services does not in his eyes consist of swept floors, coal, coke or steel, but of automobiles, it does not consist of typed letters, or of industrial fire insurance, but of television sets, it may or may not consist of the services of an attorney, but in point of fact most legal services are sold to firms or other groups who in turn create final products for the public But these ' intermediate" products are paid for by the public, since the terms on which final products are available reflect the costs of intermediate stages or goods, that is, the price of final products will include payments for all the services provided in connection with bringing the product to the public throughout all stages of production

When you perform services and thereby create a product, you mean by "product" whatever benefits are formally recognized as arising out of your provision of service It may include new buildings new automobiles, bread tooth extractions and piano concerts Note the words "formally recognized" the implication is that you are paid in some manner for creating the benefit You might "sit" with your neighbor's children while he and his wife take in a movie If he pays you, your babysitting is formally recognized as a product If he does not reimburse you in any way you have nevertheless created the benefit but you cannot call it an economic product Education provides another example You may acquire knowledge in a number of ways but far from all of these enter formally into economics If you attend school your education is a product because your teacher and many others are paid for their part in educating you When you acquire knowledge through informal conversation with your neighbors friends and family the benefit still exists but there is no economic product Important benefits often arise out of activity that cannot be classified as economic

In these pages the act of buying final product by the public will be described by the expression "taking product" rather than by the more familiar "consumption" Experience has shown the expression "consumption" to be confusing because of its ambiguity The implication of the word "consume" is that product is "used up" or "devoured", but economists are not ordinarily concerned with the "using up" of final products, but are instead more concerned with the act of buying the product Unfortunately, the term "consumption" is widely used to mean *either* the taking of product or using it up Sometimes the two processes occur simultaneously when you "take" a vacation, you also use it up But more often the two processes are distinct, when you buy an automobile you do not expect to "consume" it immediately When you come across the term "consumption" in economic literature or in journalistic accounts, make sure in which sense it is being used

Take note also of the use of the term "product" in these pages "Product" can be a singular noun, as in "a product" or "several products", or it can be a collective noun, as in "total product." In the latter sense, it substitutes for another familiar expression, "goods and services," because the term "service" is used to describe what you do rather than what you get, and to use it in both senses would involve another ambiguity

"Service"

How is product created? The question might be asked in another way: What kinds of services can you provide for which you are paid? You create product in either of two general ways, by providing either of two kinds of services:

I **LABOR SERVICES** In economics the pay for labor services is ordinarily called wages whether the recipient is a commissioned salesman a salaried executive or an hourly paid production worker

II **OWNERSHIP SERVICES** In the U S economy people are often paid for owning something and are hence said to be providers of ownership services You can own financial instruments such as bonds or savings accounts for which your pay is ordinarily called interest or financial instruments such as stock certificates for which your pay is usually called profit or you may own the title to a building or other property that you let someone else use for which your pay is usually called ' rent '[1]

It is possible for economies of different types to determine how much product each person can take in different ways For instance a primitive tribal economy may determine each person s share largely by long standing tradition Another possible method is suggested by the familiar slogan of communism (but *not* Soviet practice) of from each according to his ability to each according to his need —meaning that each person can take as much product as he needs without regard to how much service he provides

In the United States and in most economies the general rule is to each according to his contribution —that is the amount of product you can take is equal to the amount of product you produce This is not the only possible method for determining each person s share of total product it happens to be the method we employ[2]

Thus in the United States if a person is paid for what he does that payment is formal recognition of the performance of some service If a man is paid *$100* for labor or ownership service that payment means that he has been credited with performance of $100 worth of ownership or labor service and creation of $100 worth of product, and he can consequently take $100 worth of product This formal recognition implies no value judgment nor does it suggest the actual consequences in terms of output of the man s activity He may have loafed all week but still received $100 in wages he did nothing at all but is formally recognized as having produced $100 worth of product

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[1] The expressions profit, interest rent are used here in the same way commonly used in everyday speech Note however that the expressions when used this way have no *precise* meanings For instance if you hold a savings account of one kind your pay is called interest' but if you hold a savings account of another kind (at a mutual savings and loan association for instance) your pay is called a dividend —a term usually associated with profit If you own a building and let others use it in exchange for money you are said to receive rent' but if instead you own a share of a corporation that owns the building your pay is said to be profit Economists have for these reasons developed more precise definitions of these terms definitions that need not be used in this context but that will be necessary in microeconomic analysis

[2] To each according to his contribution is the general guiding principle of most modern economies but in practice it is modified by such institutions as progressive income taxes and public welfare programs

The idea that actual work involves the creation of product will come as no surprise and will be readily accepted But the idea that *owning* something such as a financial instrument, also is a productive service may be intuitively resisted Later in this volume, it will be shown how the ownership by an individual of a financial instrument can correspond to the ownership by a production group of some productive asset But this is not the place to defend the idea that ownership can be a productive service All that need be said is that in the U S economy, people are paid for owning things, that payment itself constitutes formal recognition that a service is being performed

I PRODUCTION GROUPS

The number of final products produced through the efforts of but a single person or family is quite small Usually people organize into groups or supply services to already organized groups, instead of going into business for themselves Of course, there are still many individual or family firms, notably farms, small retail stores one man barber shops and occasional professional men who work alone But by far a greater percentage of business activity is conducted through formally organized production groups," including the several forms of business organization many types of government agencies on all levels of government, and several other types of groups of less economic significance, such as churches and private educational institutions

Even the one man and one family firms have to be formally considered as production groups Recall that the individual as a provider of services and as a taker of product falls into one sector, the people, but his firm—even if he is the only owner and only employee—falls into another sector, private business He provides labor and ownership service to his firm, and can as a consequence take product

A Primitive Example

The idea of a "production group," as well as a number of important points which come up later may be clarified by a primitive example Suppose a small group of people decide to join together to produce bread Formerly, each produced his own bread—growing the grain, milling it and baking the bread, but they now decide to do the same thing jointly, in the belief that they can be more efficient if each person specializes in what he does best.

The baking of the bread is a joint effort, so that what is produced by a single individual cannot be identified After it is baked, the bread belongs to the group—a "production group"—jointly The group must in some way determine how to divide the bread among the participants It may decide to divide it equally, so that, for example, each of eight persons would get five of forty loaves baked It may instead decide to divide it according to need, or according to an estimate of how great a contribution each member made to its production

Each member, then, will have a claim to a certain amount of bread And the total amount of claims to bread allocated among the members *must of course, equal the total amount of bread produced* This is true even if the production group is "owned" by one of the members, and the others "work for" him The total of claims to bread allocated among the members cannot be other than the total bread produced Once all members receive the bread to which they are entitled, *no claims to bread will remain*

Now suppose that instead of dividing up the bread among the members, the group decides to sell it to others for money The members are in that case not allocated claims to bread; but they are still allocated claims to the value of what they have produced They have a claim to the money received in sale of the bread Yet it still must hold that the claims allocated cannot possibly be different from the value of the product—the amount of money received in exchange for the bread This is true, even if one of the members is the group's "owner" (his share is "profit") and others are "employees" (their share is "wages") However complex may be the organization of a production group, its essential character remains it is an organization, formal or informal, of people, in which they can jointly create some product to which they jointly have a claim

Production groups, then, are organizations, formal and informal, in which people join their labor and ownership services in the creation of product There are great differences, however, among production groups—differences in the manner of their organization, their positions before the law, and their formal relationships with other production groups And these differences are over and beyond the obvious differences in size of group or in type of product created

What Constitutes a Production Group

With very few exceptions, people in the United States create product as members of production groups Sometimes a single person will constitute a production "group", but more often it will consist of several persons whose various services are combined to create product The typical production group acts as a unit, in the sense that the product created is usually thought of a a "group product" rather than the product of separate individuals You do not attempt to identify personally all the people who contributed to the production of the pen you have in your pocket or purse; you say it is made by "Parker Pen Co " or some other production group The product is considered jointly created, and is offered as a group product to individual buyers or to other production groups

You are a member of a production group if you contribute directly to the product of that group the test being whether you are paid by that group Note the words *contribute directly* you might contribute to the production of automobiles by mining coal but your contribution would not be a *direct* one and you would not be paid by any automobile firm Claims may be allocated to you for your labor service or for your ownership of financial instruments—stocks bonds and the like—issued in the name of the group You become a member of a group then when you work for it or when you own a financial instrument issued in its name

Membership implies nothing social and can mean quite different types of association for different persons You may work for a firm for a day while someone else may have worked for the same firm for fifty years You may have been given a share of stock in a firm at birth and have held it faithfully ever since someone else may have just bought 100 shares of the same stock on the Pacific Stock Exchange and sold it moments later on the New York Stock Exchange at a profit You may not be very much concerned with the fortunes of your production group and are ready to leave whenever you get a better offer a fellow worker may identify himself quite personally with the group—he may be a company man

Moreover you may easily be a member of more than one production group at the same time A few people work for two or more companies you may only work for one but hold financial instruments issued by another Or you may not work at all but hold financial instruments issued by several firms

Relations between Production Groups

Production groups deal with one another largely on the basis of purchase and sale to combine the product created by separate production groups Often one group buys materials from several other groups combines and fabricates the materials and then passes title to the combined product to another group If you are a member of a group concerned with one of these early stages of production (perhaps your firm extracts processes and sells raw materials) you might try to identify the final product or products with which your group is associated Sometimes a group will add value to a product without ever taking title to it it may never even handle the product A railroad for example transports materials but it does not own them an advertising agency according to economic criteria, adds value to products but it does not handle them Groups may also deal with one another to combine personal services A firm may buy legal service from a law firm engineering service from an engineering firm or management service from a management consulting firm

One production group is often said to own another production group, in the sense that it holds in its own name all or a major share of the stock certificates issued by the other group Such a group might be called a parent firm or holding company, and may own stocks issued by several production groups Such a method of organization may reduce the independence of each of the subsidiary groups, but it also provides a basis by which the administrators of one group can supervise the activities of all the groups How closely "parent firm" management supervises the activities of subsidiary groups varies considerably among such combinations Sometimes the arrangement allows such a highly integrated operation that, for all practical purposes, the entire combination of production groups might be regarded as a single firm In other cases the holding company may try to exert little or no influence over the activities of subsidiaries, and merely holds ownership shares for profit purposes

Obviously, what may be called a single production group must be fairly arbitrary Some firms operate in all stages of the production process, mining or otherwise obtaining directly the ingredients necessary for fabrication, fabricating the product themselves packaging it, distributing it to retailers and perhaps even selling the final product to the public through their own retail stores The A & P grocery chain does much business on this basis On the other extreme, a firm might be engaged in one highly specialized task in a complex production process, such as stamping gold letters on book bindings Legal, rather than economic, criteria are applied in defining a production group in these pages, if the courts recognize a combination as a single firm, it will be regarded here as a single production group, even when several firms combine to operate as if they were a single firm if the law regards them as separate entities, they must be regarded here as separate production groups

Types of Production Groups

Production groups may be classified in several ways depending on your purposes You might want to classify them by size, by age, by type of organization, and so on Two common ways of classifying production groups are (1) by the type of function they perform, such as mining, manufacturing transporting, retailing and the like, and (2) by the type of product handled such as food products, electrical appliances, and hardware A classification by function might reveal that in the twentieth century, the number of people engaged in the "service trades" has been growing more rapidly than the number of people engaged in manufacturing, and that the number of people engaged in agriculture has been declining A classification by type of product could be used to compare pricing practices, sales procedures and financial methods in different industries, for instance, a comparison would show that the steel industry behaves quite differently from the textile industry in these respects In this chapter, attention is centered on another type of classification scheme how production groups are organized

Regardless of how they are organized, all production groups have some features in common They all have some kind of arrangement for holding assets (property) in their own names But what the "arrangement" will be in each case depends on the form or organization All production groups have a method for 'making both ends meet,' that is making the value of the product equal to the value of the claims allocated to those who provide services Different types of groups, again, employ different methods And all production groups have a method of choosing administrators, once again the technique varies depending upon the formal organization of the group How different types of organizations carry out these basic tasks will be outlined briefly

A AN ARRANGEMENT FOR HOLDING ASSETS Production groups hold *assets* in the name of the group Some assets may consist of productive facilities (building, equipment, and the like), but production groups also hold other property classed as assets, including money and financial assets in the broadest sense (including of course such things as bonds or notes but often also including less formal obligations, such as the unpaid bills of customers) Production groups usually also have *liabilities* they have obligations to pay other groups or individuals, either immediately or at some future date They may have issued bonds, borrowed from banks, or bought things on credit, they probably have unpaid bills and salary obligations as well

With but a few exceptions, the value of a group's assets will be greater than the value of its liabilities, that is, if the group could sell everything it had of value, and if it could collect on all its claims against others, it would still have something left after it had settled its own obligations What would be left over should clearly belong to the owners of the production group (holders of stock certificates, for instance) But sometimes there are no "owners" in the usual sense For instance, who "owns" a church? But if a church should sell its assets and pay its creditors, it will usually have something left over Whether there are "owners" or not, the difference between assets and liabilities represents the 'net' value of assets, after obligations have been deducted, and is called *net worth* Net worth is held in different ways by different types of groups

1 *Privately Owned* Net worth of a production group may be "owned" in the usual sense, that is, the production group may be a private, profit seeking firm Most production groups in the United States are of this sort The net worth of such groups is owned privately, by individuals (or by other production groups, which are in turn owned privately) for the purpose of private gain

2 *Trusteed* Net worth of a production group may be held by a board of trustees or similar group Such is the case with "private" or "independent" universities and with many churches The net worth is "owned' by the board of trustess *as a group*, but none of the individual trustees owns any share of net worth as a private individual As individuals, trustees cannot sell shares *nor do they hold shares for personal gain In fact, there* ordinarily are no shares" at all, the institution as a whole is 'owned" by the board of trustees as a whole Somewhat different, but under the same general heading are mutual savings banks, mutual insurance companies, and the like which are nominally "owned' by depositors and policyholders

3 *Held in Common* Net worth may be 'held in common" For example city governments are said to "own" buildings, trucks, parks machinery *and the like In contrast with private firms, there are no shares* held by individuals, and, in contrast with groups headed by boards of trustees there are no specifically designated individuals to hold net worth as a group The net worth is said to belong to 'the people", but government units do not often even attempt to place values on commonly held net worth so you will find no record in the state building city hall or country courthouse of how much net worth "the people" hold in common much less what your own share is

B A METHOD FOR MAKING BOTH ENDS MEET You have already noted the requirement that all production groups allocate claims equal to the value of product created That is a production group must *pay* for services what it is *paid* for product In this sense, each group must 'make *both ends meet But different types of production groups use different* methods for maintaining this equality between the value of the claims it allocates and the value of the product it creates

1 *Profit and Loss* The profit and loss method is used by production groups that have privately owned net worth Since privately owned business firms are of the greatest economic significance of all types of production groups this method is discussed in some detail

Most members of any production group, no matter of what type want to know in advance at what rate they are going to be paid You do not take a job with a firm unless you have a pretty clear idea of your wage You would be pretty dubious if the group s managers told you, "Wait and see how well the product sells, if we are successful, you'll do well, if we aren't we may not pay you at all" Nor would you buy a bond without a clear idea of what you would be paid for owning it

Yet the production group does not know the value of the group's product until after you and other members have provided your services and after the product has been sold The value of the product created must be equal to the claims allocated, *you insist on having your claims allocated in advance* even though the group does not know the value of the product in advance Administrators have a decision making problem they must decide on the rates at which claims will be allocated before they know what the value of the product will be

Moreover administrators do not know with precision what quantity of services will be needed to produce an unknown (or even a known) quantity of product

How can such decisions be made? The problem is not usually as great as it may seem Administrators while they may not know the exact value of the product in advance usually have bases for making fairly close estimates They attempt to predict the price at which the product will sell and the quantity that can be sold at that price Then on the basis of past experience they can estimate the quantity of labor services that will be required and the quantity of productive equipment they will need

The administrator usually sets forth these estimates in a more or less elaborate budget Budgeting has become an important feature in the operation of many business firms as a method for making both ends meet in a satisfactory way

In privately owned business firms however both ends *must* meet whether or not there is a budget Some but not all rates of pay will be determined in advance before the value of the product has been determined The rates of pay of the owners of net worth—the proprietors partners or stockholders—are not determined in advance When the value of the product exceeds the claims already allocated to workers and bondholders the owners of net worth have a *profit* their pay is a residual —they get what is left over Occasionally the value of the claims already allocated at rates determined in advance will exceed the value of the product created and there will be losses or negative profits

While other rates of pay are determined in advance then profits are a residual share There is no reason however why the method described *must* be used by privately owned business firms Economic organization could conceivably be such that the owners of net worth would be guaranteed specific rates of pay in advance and the providers of labor services owners of land or some other group might divide the residual and hence be the risk takers In fact the consumers cooperative provides a manner in which the buyers share the residual What is necessary is that *someone* receive a residual share dividing profits or losses so that both ends may meet In the economy of the United States under a capitalistic economy it is the capitalist'—the owner of net worth—who is allocated the residual profit or loss

The description of profits as a residual share might seem to imply that the size of profits is a mere accident this is not entirely true While profits may sometime be much larger than expected (as may losses) administra tors usually direct their efforts to achieving their profit objectives, and the *policies of the firm are watched very closely in order to attain this goal*

When a firm makes a profit there is an automatic increase in the value recorded for net worth In the first instance, the profit will take the form of an increase in the firm's assets such as when an inventory or consumer product purchased for $5000 is sold for $6000, in place of an asset —inventory—valued at $5000, there is another asset—money—valued at $6000 Whenever assets are increased and liabilities are unchanged (as in this example), the value of net worth is automatically increased, since net *worth is always obtained by subtracting liabilities from assets The firm* has not yet paid any dividends (and may never), but the owners of net worth *have* been paid, since the value of net worth has been increased *If they are subsequently paid dividends,* they will be paid money, thereby reducing the firm's assets, the reduction in assets, with liabilities unchanged, will automatically reduce the stated value of net worth

The policies of different firms vary with respect to transferring money to the owners of net worth Proprietors of individually owned firms and partners in partnerships usually take profits out monthly, or even more often Corporations most commonly pay cash dividends every three months or every six months Some highly profitable corporations pay little or no dividends, *shares of stock in such corporations are known* as "growth" stocks since payment to the owners takes the form of regular increases in the value of the stock, rather than periodic money transfers *Larger corporations adhere for fairly long periods of time to predetermined* dividend policies, making quarterly payments of, say, 50 cents per share even when profits are above or temporarily below that amount

*When there are losses (that is, when the value of the product cre*ated is less than the claims of those whose rate of pay was determined in advance), the stated value of net worth declines, because assets decline in value relative to liabilities The effect is to allocate "negative claims' to the owners of net worth

2 Surplus and Deficit The surplus and deficit method is used in production groups having trusteed net worth, that is net worth held in the name of a board of trustees Little time need be spent on this method, both because it is less important quantitatively than the other two, and because it is very little different from the profit and loss method just described

Some trusteed institutions create and sell a product, others cannot *be called production groups, and will not be discussed here Private* hospitals and universities are engaged in creation of salable product and use the surplus and deficit method In addition some government corporations and authorities such as toll bridge authorities and the TVA do not receive regular appropriations from political jurisdictions and in fact do not enter into any government budget, but instead have their own budgets and use the same surplus and deficit method of making both ends meet.

Like private firms, trusteed institutions and public authorities have to allocate claims at rates determined before the product is created and its value determined. Those who supply labor services to, or buy bonds from, an independent hospital feel no differently about assured rates of pay than do employees of private profit-making firms. And, as in private firms, there may be (and generally is) a difference between the value of the product and the value of the predetermined claims. The difference is not called profit or loss, since for the most part these groups are organized on "nonprofit" bases; the words "current surplus" and "current deficit" are used instead, carrying the same general meaning as "profit" and "loss."

Like private firms, these institutions and authorities have assets, and like private firms they account for their ability to hold assets by means of liabilities and net worth. A current surplus takes the form of an increase in the value of assets, resulting in an addition to the stated value of net worth (and a deficit reduces net worth). But unlike private firms these groups do not ordinarily reduce the net worth by the payment of cash dividends to anyone.

3. *Appropriation.* The appropriation method is used by groups that have net worth held in common, that is, by government units (other than the independent authorities just mentioned).

By and large, production groups for which the net worth is held in common are government units that do not *sell* a product. These groups do not make the value of claims equal the value of the product by an adjustment in the stated value of net worth; in fact, most government units do not report the value of assets, liabilities, and net worth in any type of balance sheet, and net worth has no "stated value."

The method these groups employ to make both ends meet is completely different, then, from that employed by the first two types of production groups.

The usual procedure is this. Administrators set forth in advance a budget giving the value of the claims they expect to assign to those who perform service in the group (the "expected expenditures") and the product they expect to create. The budget is submitted to some legislative body (Congress, state legislature, city council) for revision or approval. The legislative body makes an appropriation equal to the expenses shown in the final budget. It is the *appropriation* and not the budget that is the special feature of this type of organization. Beginning with the appropriation, there are two possible courses.

The administrators may be prohibited from allocating claims in excess of the amounts budgeted. Both ends meet—the amount appropriated and the value of the claims allocated. When this practice is followed, the government unit involved has an effective limit on its activities, the nature or size of the product is controlled by the machinery of appropriation

On the other hand there are government units that cannot operate well under such limitations. They have an obligation to provide a particular product for the citizens and must do so however much the cost of doing so may vary For example, a unit may be required to remove snow from city streets. In such a case it could not be given a severe limitation on the amount of claims that might be assigned because budget makers never know how often or how much it will snow In these cases administrators are given more discretion in determining what the value of the product will be. If the administrators find that the product that is desired will require the allocation of a greater amount of claims than was expected the budget will be revised, the value of the claims that had been assigned may be supplemented with a deficiency appropriation'

Either there must be some flexibility in the nature of the product that is to be provided or there must be some flexibility in the value of claims the administrators can assign. Otherwise, the administrators may be faced with an impossible job in their task of making both ends meet.

C A METHOD OF CHOOSING ADMINISTRATORS All types of production groups need administrators whether these are to be called management, as in bigger businesses the boss as in smaller businesses the administration as in colleges and universities or department heads (or bureaucrats) in government agencies Each type of production group has a somewhat different method of choosing administrators.

The owners of net worth have the task of choosing the administrators of groups whose net worth is privately owned In fairly small firms owners and administrators are the same people. In the corporate form (which will be discussed in detail) the owners elect a board of directors the board of directors then represents the owners in appointing the administrators. Corporations vary widely however in the extent to which actual practice corresponds to legal prescription. In large corporations the directors and administrators tend to form self perpetuating bureaucracies and owners of net worth have little to say about who the administrators will be, except in the occasional event of a "stockholders revolt.'

The administrators of a production group that has trusteed net worth are chosen by its board of trustees. In some cases, the board of trustees itself is a self perpetuating body the members select their own successors. In other cases, the trustees are appointed by a complex system designed to get representation for a number of viewpoints or interests. In the cases of government corporations or authorities, the trustees are appointed by politically elected officials.

Some administrators of government units (other than government corporations and authorities) are elected by the public; others are appointed by elected officials.

Of course, these descriptions have been highly simplified as well as highly generalized. Within each of the three categories, there are many variations; and beyond that, there are several types of organization, such as churches and labor unions, that do not fit well into the categories, and would probably deserve categories of their own if they were quantitatively important enough *as production groups*. But the discussion will serve to indicate the major aspects of differences in the organizational features of production groups. The not easily classifiable groups are responsible for a relatively small amount of economic activity, but also small is the amount of economic activity carried on by the second category of production groups, those with trusteed net worth. Government and private business are responsible for virtually all economic activity, and other types of organization are by and large ignored in the remaining pages of this book. About 10 percent of all gainfully employed persons are employed in government units; almost all the remainder are employed by private business. About 20 percent of all product is taken by people collectively through government units. The remainder is taken individually. Even government units are of comparatively small economic significance, then, in terms of volume of activity.

For these reasons, a detailed discussion of the organization of production groups must center on those groups with privately owned net worth. It should be mentioned in passing, however, that the economic significance of the activity of groups organized on other bases may possibly be far greater than is indicated by the value of the claims they allocate or the value of the product they create.

II TYPES OF GROUPS THAT HAVE PRIVATELY OWNED NET WORTH

While the most important broad category of production group is that composed of groups with privately owned net worth, that is, business firms, there are within that category several types of legal arrangements for the ownership of net worth. The main types of groups to be described are proprietorships, partnerships, and corporations. Of these three types, the first two have much in common, and the third type, which is the most important form of organization of private business firms, has many points of difference from the others, particularly with respect to the legal relationship of the firm to the owner of net worth.

A. PROPRIETORSHIPS. A proprietorship is a private business firm whose net worth is owned by one person alone, and whose assets and liabilities are regarded by law as the owner's own personal assets and liabilities.

The typical proprietorship is a small business whose owner also acts as manager (and sometimes the only provider of labor service) The owner may keep a record of the assets of the business separate from his personal assets, but legally the two are not separated All the profit is allocated to him, and he must pay personal income tax on all of it Similarly all the firm's losses if it suffers any, are allocated to him, this point of law is quite important for it means that if his firm suffers major losses the owner may lose his entire personal fortune including his house car, savings account and the like If he allows someone else to run his business for him, he is in effect putting his entire estate in his employee's hands

When the owner dies, his beneficiary or beneficiaries become the owner or owners of the firm's net worth If his beneficiaries are incompetent or quarrelsome, the firm may fail

The amount of a proprietorship's assets are limited by the owner's own personal wealth perhaps augmented by what banks or others may lend him Thus it is rare that you find a very large firm of the proprietorship form If a proprietorship has prospects for growth but the owner finds the firm's expansion checked because his own assets are limited he may try to borrow, however, he will find others cautious about lending to him because his own life is uncertain and no one knows what will happen to the business at his death Even if the owner does not die he may become disabled through a heart attack or an automobile accident Lenders are reluctant to risk very much when so much depends on one man If he wants his business to grow, the owner eventually may turn to a partnership or corporate form of organization in order to expand his firm s assets

B PARTNERSHIPS The partnership form of business organization is similar to the proprietorship form but the net worth of the firm is owned by two or more persons There are various types of partnership arrangements Each partner may have an equal share of the net worth of the business, or the shares may be unequal with the partnership agreement specifying for example 10 percent 15 percent 25 percent and 50 percent shares respectively for each of four partners The assets of the firm will again, be recorded separately from the personal wealth of each partner, but ordinarily each partner is liable to the full extent of his personal wealth for the obligations of the partnership There are exceptions to this rule however the partnership agreement may specify that certain partners (but not all of them) have limited liability, and can lose only as much as they have voluntarily invested in the firm

Most partnerships are two or three man concerns, many of which have grown out of proprietorships Proprietors often decide that their chances for success or growth would be enhanced if they took partners by combining their assets and their talents the partners may be able to provide a bigger or better product than each could provide separately And since each partner usually has unlimited personal liability for the debts of the partnership they may find lenders less hesitant to lend than would be the case for a proprietorship

But partnerships are difficult to hold together Whenever a partner withdraws the firm must be dissolved It may be reorganized promptly but in smaller businesses reorganization is not always possible or simple People may be reluctant to risk their savings in a business in which others share authority and profits, and in which any partner may cause serious disturbance by withdrawing or threatening to withdraw from the firm

Partnerships are most frequently found in activities in which continuity of operation is not of critical importance, such as the wholesaling and retailing of some products and the provision of such professional services as law and medicine In the professions especially, the partnership form has taken the status of a tradition, with the corporate form so rare as to be an oddity But in most types of business activity, partnership imposes severe handicaps and limitations for harmonious and continuous operation Many of the difficulties inherent in the proprietorship or partnership are overcome in the corporate form

C CORPORATIONS Some firms that for all practical purposes appear to be proprietorships, in the sense that they have a single administrator and virtually a single owner are legally organized as corporations And some firms that are operated as partnerships, in the sense that but a few people combine their talents and assets to run the firm, are also legally organized as corporations The corporate form of business organization, which is often thought of as the organization form of Big Business, has many advantages for firms of any size

The principal distinguishing characteristic of the corporate form of organization is that a corporation's assets and liabilities and those of the owners of a corporation's net worth are legally separate While proprietorships and partnerships have no legal existence of their own, and are regarded by law as activities of their owners corporations are treated by law as if they themselves were separate "persons" The importance of this feature will be obvious when it is recalled that the owners of the net worth of proprietorships and most partnerships have 'unlimited liability", that is, any losses the firm suffers must be made up out of the owners' own assets as long as they have any Owners of the net worth of corporations, on the other hand, have "limited liability", any losses a corporation suffers must be made up out of *the corporation's* assets, as long as it has any, but the owners of net worth cannot lose more than the value of net worth—that is, their shares of net worth may become worthless through the bankruptcy of the corporation, but they are not personally liable for any losses

A corporation comes into existence when the owners of the net worth of a production group are issued a corporate charter by one of the states or in special cases by the federal government. The charter itself is the instrument that legally authorizes the production group to enter into a specified type of business (usually quite broadly stated to allow for flexibility) and to make a legal separation of the assets and liabilities of the firm from those of its owners. The net worth of the firm is divided into equal shares usually called shares of capital stock. Once the corporation has been organized the ownership of net worth may be transferred through the sale of shares by the original owners without forcing the dissolution or reorganization of the firm The corporation's legal existence is separate from and independent of the legal positions of its owners.

Some major advantages of the corporate form of organization over the proprietorship or partnership forms can be exploited by owners of small firms The limited liability feature reduces the risk of entering into business. Moreover no owner of net worth need be concerned about the withdrawal or death of one owner which in the partnership form would force a dissolution or reorganization The life of a corporation is often said to be permanent although of course it is doubtful that any firm will continue operating forever

While larger businesses also secure these same advantages from the corporate form for these larger units the chief advantage of incorporating lies elsewhere with the proprietorship and partnership the net worth of the firm is limited to the assets of one or a few persons and the size of the firm is limited When the corporate form is employed the wealth of literally thousands of persons can be used by a single business firm.

The advantages described apply to firms engaged in all kinds of activities. The corporate form is more than an advantage and is almost a necessity however for kinds of economic activity in which continuity of operation is important. In noncorporate forms the danger of dissolution is always present but a corporation's fortunes are not linked inextricably with those of the owners of net worth

One other key feature of the corporate form merits discussion While it is always possible for proprietors or partners to hire managers to operate their businesses, most such owners of net worth are usually disinclined to abdicate completely a role in the supervision of their firms because the unlimited liability feature means that personal ruin for the owner could result from mismanagement of the firm In corporations the owners of net worth rarely display continuing interest in influencing management policy and those who actually administer the firm often own only a small number of shares. (It is usually wise for them to own some shares if only for the sake of appearances but some administrators own no shares at all)

This opportunity for separation of administration from ownership is another characteristic of the corporate form that makes that type of organization attractive for large business ventures. Through the corporate device those who have talents as administrators can secure positions even though they have little personal wealth And the reverse is true those with substantial personal wealth can become owners of net worth but take no part in administration Often persons of substantial personal wealth can be owners of part of the net worth of several firms thereby reducing their own risk of a large loss they could not do this easily if they felt required to take a supervisory interest in all the firms in which they had an ownership interest If a person had to be both an administrator and the owner of net worth in order to be either both administration and ownership of net worth would most likely be done less adequately

Ownership of shares of net worth (stock certificates) may be transferred with no change in administrators and the administrative staff may be changed without change in the ownership of net worth Owners of net worth and administrators withdraw from the firm or die and new ones come to take their places The firm goes on There may even be simultaneous changes of major proportions in the persons who own net worth and who administer a firm with very little change in the operation or policy of the corporation

From the point of view of both the administrators and the owners of net worth the separation of the two functions tends to be a good thing That this is so does not necessarily mean that the separation is a good thing for society in general although it has already been noted that the corporate form allows for specialization in the functions of administration and ownership of net worth with the likelihood that both jobs will be better done Over the last few decades, however, there has been increasing criticism of the growing divorce of ownership from control seemingly inherent in the corporate form Commentators have argued that the tendency will lead (or has led) to a less dynamic type of business administration, the argument is that owner managers are inclined to be more daring and enterprising since their central motive is to maximize profits while hired administrators are inclined toward conservatism and caution since their central motive is to maintain their own positions Management, it has been argued, is usually reluctant to try anything that might fail or bring criticism It has also been prophesied that the overcautious conservatism of hired administrators will spread to the nation as a whole, as a growing "managerial class" assumes power in labor unions and in government as well as in business

The present discussion is more concerned however with the forms of business organization than with their social implications It is to be stressed that *the one key feature* that makes the corporate form seem advantageous to owners of net worth is the legal separation of the assets and liabilities of the corporation from the assets and liabilities of the owners of net worth From this feature follow the others the limited personal liability of the owners for the obligations of the firm, the opportunity for worth into two primary parts one representing the net worth at the time the firm was begun labeled something like original capital and another representing the portion of profits not paid out in money to the owners of net worth but left instead with the firm labeled surplus or retained earnings

The net worth of corporations is divided into shares Net worth of $50 000 as shown in the simple balance sheet above, might be divided into 1000 shares each with a nominal (or face") value of $10 for a total nominal value of $10 000 This $10 000 would be reported as the 'capital stock' account and the remaining $40 000 would be listed as 'surplus" The total nominal value of $10 000 may represent the net worth at the time the corporation was formed and the $40 000 surplus may result from undistributed profits But perplexing as it may at first seem corporations often show a stated value (often a large one) for "surplus" on the first day they are organized before any retained earnings could have been accumulated In such cases the original stockholders have paid more than the face or nominal value of the stock certificates for their shares, shares of stock that originally sell for much more often carry nominal value of $1 or $10 merely to satisfy a requirement that some face value be shown In such cases only the nominal value of outstanding shares is reported as "capital stock" The remaining 'surplus" will include both the premium over face value paid by the original shareholders and the earnings retained since organization, the two are often shown in separate accounts, the first called paid in surplus and the second called earned surplus

Two often confusing points deserve particular emphasis The first is that the "surplus" account is a part of "net worth," and not of "assets" Surplus is not cash buildings machinery, inventory, or any other asset You cannot ask an administrator to "show me your surplus" Surplus is but a way of reporting an arrangement that permits the firm to hold assets, the assets that are the counterpart of the surplus account remain unspecified

The second point is that the way to determine the "book value" of a share of net worth is to divide the total net worth by the number of shares 'Book value" means the value of a share of net worth *according to the firm s books,* that is, its records Where shares of net worth are actively traded on stock exchanges, the selling price may diverge considerably from the book value Even if the value of the assets is stated correctly on the firm's balance sheet, the holder of a share may not be able to find anyone *who would pay him as much as the book value for his share* Or, because the firm's future potential is highly regarded, a shareholder may be able to sell for substantially more than the book value A share of net worth does not represent an obligation of the firm, the firm cannot be required by a shareholder to take back the share for any amount of money

The owners of the net worth of any business firm have a threefold relationship to the firm They (1) enable the firm to hold assets of equal value to the value of net worth, (2) take the profits and losses of the firm, and (3) select the administrators of the firm. In a corporation the owners of net worth may divide these functions or bear them in varying degrees. There are different types of shares of net worth and the owner of each type may bear a different type of relationship to the firm. The owners of "common stock" represent the shareholders to whom the preceding descriptions apply most completely: the owner of common stock enables the firm to hold assets, he shares in all the firm's losses but sometimes in none or only in part of its profits, and he shares in the selection of administrators. The owners of "preferred stock" have a somewhat different type of relationship with the firm, they are given first claim to dividends, up to a certain predetermined maximum dividend value, they are also given first claim to the assets if the corporation is dissolved, but they usually cannot share in the selection of administrators.

The administrators of a firm that has potential for expansion and which could make good use of additional assets may, with the authority of the owners of net worth, issue new stock certificates to expand the value of net worth. In such a case the nominal value of the shares sold would be *added to the "capital stock" figure in the firm's records and whatever else* the new shareholder had to pay for the stock would be recorded as "surplus."

There are several reasons, however, why the administrators or owners of a firm might want to expand the firm's assets without issuing new stock certificates and expanding the value of net worth. They may not wish to share future profits with any new shareholders and they themselves may not wish to buy the new shares. Often carrying more weight than profits is the unwillingness of owners of net worth to share the power of ownership—the right to chose administrators—with any new shareholders.

Under these circumstances, the firm will not issue additional shares of net worth, but will issue instead other kinds of financial instruments. There usually are people who are both able and willing to make it possible for the firm to hold assets (they have some wealth and wish to employ it in a manner that will bring them income), but are not willing to share in the risk of loss involved in owning net worth (they want their rate of pay determined in advance) and are not interested in participating in the selection of administrators. They are quite satisfied with the promise of payment of a fixed sum periodically (as "interest," not as "dividends"), and the promise of the return of whatever was originally paid for the instrument (the "principal sum") in cash at the expiration of a specified period.

The firm will issue financial instruments in the form of *promises* or IOU's which are "liabilities" of the firm. The people who buy them hold the instruments, and the firm is able to hold assets. Such a firm now holds assets by virtue both of its net worth and its liabilities. If your firm were now to expand its assets from a value of $50 000 to a value of $100 000 by issuing $50 000 worth of promises its summary balance sheet would now disclose

YOUR FIRM

Assets	*Liabilities*
$100 000	$50 000
	Net Worth
	$50 000

Promises may be called bonds (or debentures), if they will not expire and the principal sum will not be due for a fairly long period of time usually five years or more, or they may be called notes if for shorter period of time Usually bonds will be issued when the firm wants to hold assets that are expected to last a fairly long time—new machinery buildings and the like notes will ordinarily be issued to allow the firm to hold assets in the form of so-called working capital—inventory, cash, and the like

Just as net worth may be divided into shares a promise may be divided into parts Bonds are usually issued in round numbers typically $1000, or sometimes in multiples of $1000 Thus a million dollar promise may be split up into one thousand $1000 bonds The firm may agree to pay $40 a year to the holder of each $1000 bond—4 percent of the face value—and to pay the principal sum ($1000) in money twenty years after the bonds were first issued A million dollar promise issued in the form of notes may take several forms perhaps a single note for $1 million will be issued, or two notes, one for $250 000 and one for $750 000 may be issued to two different lenders, or any other combination may be employed, with any number of lenders

In summary, the arrangements that permit a firm to hold assets are various types of promises and net worth Or, put another way, people make it possible for business firms to hold assets by holding the promises or net worth of the firms With various types of preferences and limitations, shares of net worth can become very much like promises, and promises can be given features that make them very similar to shares of net worth

The major categories on the balance sheet of your firm would then be these

YOUR FIRM

Assets	*Liabilities*
Money	Promises (bonds and/or notes)
Other financial Assets	
Inventory	*Net Worth*
Equipment	Capital Stock
Buildings	Surplus

The two sides of the balance sheet must always be equal because the figure for net worth is reached by subtracting the value of the liabilities from the value of the assets

Other items that might complicate the record should be mentioned briefly Included among the assets might be some that are more of a short term variety such as the unpaid bills of customers ("accounts receivable"), conversely liabilities might include similar short term obligations of your firm (salary payable " 'accounts payable") Also complicating is the question of the proper value to state for assets such as buildings or machinery Obviously, these assets do decline in value as the years go by, but it is difficult to determine by just how much The problem of declining value of physical assets gives rise to the problem of correctly depreciating or reducing the stated value of the assets in a firm's records There are many other problems of accounting that cannot concern us here, not because they are unimportant but because the major job at hand is an exploration of the principles of economics

But you have not seen the last of the production group, nor of its *balance sheet*

4

A FIRST LOOK AT MACROECONOMIC RELATIONSHIPS

In one sense persons provide services to production groups But in a larger sense persons provide services to the entire economy In one sense, persons are paid for their services by the production group to which they provide services But in a larger sense, the benefits they receive in exchange for their services are provided by the entire economy

The relationship of an owner or an employee to his production group is a little more complex, then, than appears at first examination In common language, you will say, "I work for the General Electric Company," or "I work for the City" But for whom are you really working? Legally, your ultimate superiors usually are those who own the business firm for which you work, but often these owners themselves have little control over the policies of their firm and hold some legal evidence of ownership merely in order to earn ownership income, with no thought of control You might say that you work for management, but whom does management work for? If you are employed by a government agency, are your employers "the people"? If so, how much direct control have these "employers" over your services?

You might say that you are working for those who *use*, say, General Electric products, or as a city employee you work for the residents of the City Indeed, it is for these people that you create product But these are not necessarily the same people who create product for you, so even this answer is not fully satisfactory

If you were the only one involved in the creation of a particular product (with no other members in your production group, and no other stages in the production process), and if you traded that product for something produced by just one other person, whose only customer was yourself then you would obviously be working for each other But if you provide services that help produce a wide variety of products purchased by a great number of people in many parts of the world and if in exchange you take products produced all over the world by great numbers of people who often do not take any of the product you create whom you work for is unclear

All you can say clearly and without qualification is that your provision of services entitles you to formal claims on products and that those formal claims (usually money) pass to you through the hands of the production group by which you are employed

The Creation of Claims

In economic activity people create product for one another everyone works for everyone If you inquire what product people can take in exchange for their services there are two answers

1 When all people are considered together they can take whatever product they create Everyone's income is the same as everyone's product When all people are considered together when a product is created it is paid for If the people can create a product they can pay for it If they have already created product they have already paid for it

2 Hence when all people are considered together they can take whatever they produce We would be most unhappy however if the same answer applied to individuals as applies to people in collectivity Launderers cannot live on clean clothes alone nor can teachers live on learning a baker might be able to live on bread alone but most bakers do not want to A good many people in fact do not take *any* of the product they themselves create

Instead the economy relies on the process of trade to allow you to take product created by others up to a value equal to the value of the product you yourself have created You can take *as much* product as you create This rule requires that all product be measurable in common terms so that it is possible to say on the basis of your contribution to the creation of a product how much food clothing housing medical and educational services and entertainment you are entitled to The need for money as a standard of value is obvious in an economy that relies on complex multilateral trade In the United States the principle may be rephrased You *can take as many dollars worth of product as you create* The rule is To each according to his contribution

This is not just a capitalistic rule Despite the Marxist maxim of to each according to his need the actual practice in all Socialistic and Communistic countries is to assign money values to the contribution of each individual and pay him accordingly and to assign money values to the products made available for purchase In this respect the systems differ mainly in how the values are assigned Both American capitalism and Soviet communism follow the rule to each according to his contribution

If a production group creates $100 000 worth of product the members of that group as providers of labor and ownership services are entitled to $100 000 worth of product If owners and employees have created $100 000 worth of product they have provided $100 000 worth of services As a group the providers of services have a *claim* to $100 000 worth of product

The next question is how the pie is cut—that is how the claims are allocated among the owners and workers As described in the previous chapter most claims are allocated in advance the owners of net worth are then left with the residual profit or loss For the time being the *form* taken by these claims is not important What is important is that the full $100 000 worth of claims is allocated to those who provide services

This may be a troublesome point Sometimes students ask How can the *entire* $100 000 be allocated to the providers of services? If everything the firm gets when it sells the product is paid to the providers of services how can the firm ever make a profit?

The answer of course is that there usually *are* profits but the profits belong to the owners of net worth and not to the firm Profits are *part of* the pay to those who provide services In fact without profits (or some other residual share) some other device would have to be used to bring the value of the claims allocated into equality with the value of the product

Value of the Product

It is obviously wrong to conclude that a firm that *sells* $100 000 worth of product has necessarily created $100 000 worth of product Most production groups including the very largest of corporate giants and the tiny one-man firms perform only one or a few types of operations such as assembly transport storage or retail sales A retailer for instance usually does not alter the product he takes from suppliers but adds value to it by getting it to the public. The supplier adds value to the product by storing it until needed and by distributing it among retailers The manufacturer or manufacturers (there are usually more than one in the process of producing a final product such as a car) add value to the raw materials. And the miner farmer, lumber firm and the like also add value to the original raw material by growing it or extracting it from the earth

Only the value added by the production group can be considered to be the product created by the production group Or, putting the same thing in different words, the members of a production group are only entitled to claims equal in value to the difference between the value of the finished product of that group and the value of ingredients purchased from other groups

The value of the product of a firm, then, is equal to the firm's "value added" If the firm sells its product for $200 000 but buys $125,000 worth of product as ingredients, supplies, and so on, from other firms, the "value added is $75,000 In that case, $75,000 worth of claims are allocated to those who provide ownership and labor services

For any final product, its price is the sum of the value added by all the groups making a contribution to its production Take a garbage can that is sold to the final buyer for $5 00 At the first stage, the firm that extracts the iron ore receives $1 00, but part of this is paid to other production groups, such as the gas and electricity company, who also then add some value to the product. At the next stage, the steel company receives $1 00, but its "value added" is somewhat less because it in turn buys *products from utilities, advertising agencies law firms, and the like, all of* which add value to the garbage can At the next stage, the fabricator gets his dollar but he also pays part of it out to suppliers, such as insurance companies office furniture producers, and the like The "jobber" or supplier addes value to the product, and sells it to the retailer for $4 00, but the supplier also buys products from the same kinds of firms that sold to the first three firms The retailer finally sells the product for $5 00, but his value added, too, is less than $1 00, because of the ancillary products bought from firms other than the supplier Ultimately, dozens perhaps hundreds of firms add value to the product along the way In each of these firms there has been a product created, and in each of them claims are allocated equal in value to the value added

The total amount of claims created in the long production process is the sum of the claims allocated by each production group involved, and this total is the same as the value of the final product (garbage cans in the above) which is also equal to the sum of the value added by all production groups Claims allocated by an individual production group are equal in value to the product of that group, and the *total* claims allocated by *all* groups in any period of time equals the value of the *total* product of those groups

The creation of claims is the same as *income* as that word is ordinarily understood Thus, whether you look at it from the point of view of the value of final products as sold by the final firm, or from the point of view of the value added" by all production groups *involved, you get the* same answer ***The total product created and the total income going to people as a consequence of their contribution to production are equal*** For individuals, income earned and product created are equal in value. In the aggregate, income and product are not only equal, they are two sides to precisely the same transaction

How Product is Taken

Your contribution to the process of creating product gives you a claim to product of equal value. You can take as much product as you create through your services But the people as individuals do *not* take as much product as they produce For one thing, part of the product is taken collectively through government, and to the extent that it is, that much product cannot be taken individually. For another thing, part of the product is added each year to the assets of production groups Business firms and other groups add to their productive facilities and to their inventories, and that much product cannot be taken by the people, although it is created by the people.

Are these really exceptions to the rule? The answer can only come with a detailed examination of *how* claims are created, *how* product is taken.

Four main categories arise. Product can be taken individually, by households, for the use of the household. It can become an addition to the productive facilities and inventories of private production groups Product can be taken by the people collectively, through government units. Or it can be taken by the rest of the world.

I PRODUCT TAKEN INDIVIDUALLY

For the time being, make an assumption that will simplify the analysis. Assume that *all* product will be taken by the people individually—that there is no product taken collectively through government, and no product kept by the private business sector. Later in this chapter, this simplifying assumption will be dropped Throughout this chapter, relations with the rest of the world will be ignored. It will be assumed that all product taken domestically is produced domestically, and vice versa.

First, the people provide services to a production group, which we will assume is a privately owned organization called Firm X, and create product worth $10,000. (There is no way of knowing with certainty what the value of the product actually is until it is sold; but assume that that difficulty does not exist for you. The administrators, other employees, and owners do not know what the product is worth; but you, as an onlooker, do.)

The moment the product is produced, claims against the firm amounting to $10,000 arise. Some of these claims are assigned at predetermined rates such as interest on a bond (ownership service) or wages of employees The administrators will not know the share of the owners of net worth until later But you know for sure that the total claims allocated will be equal to $10 000

The firm now holds the completed product an asset worth $10 000 And it has claims against it a liability amounting to $10 000 It will be convenient to show these amounts in a T account similar to the balance sheet of Chapter 3 whose name derives from the fact that the first step in making one up is to draw an elongated T The T account will not show *all* the assets liabilities and net worth of a firm it will only show the *new* amounts such as a new asset and a new *liability On the left side* corresponding to assets on the balance sheet will be shown what the firm *owns*—holds in its own name On the right side corresponding to liabilities and net worth on the balance sheet will be shown the claims against *the firm claims held (owned) by others—in this case by the people as* providers of services

Since Firm X now holds $10 000 worth of product and has $10 000 in claims against it we have

FIRM X

Product held	$10 000	Claims allocated to the people for services	$10 000

(1)

And at the same time we will have

THE PEOPLE

Claims against Firm X	$10 000	

(2)

Note that unlike a firm the people do not have to account for what they hold—there is nothing on the right side of the T account This fact follows from a principle stated earlier The reason that *firms* must have liabilities and net worth equal to the value of assets is that only *people and not firms earn income by creating product* so that only by making arrangements with people (selling stocks and bonds and the like) can firms own anything But the people do not have to make such arrangements they own things by virtue of the performance of services In T account (2) *above the people own claims against Firm X by virtue of creating $10 000* worth of product

At first the claims held by the people will be claims only against Firm X—essentially claims to the product held by Firm X These claims will take the form of recorded obligations of the firm such as salary payable interest payable and so on

But while the people have claims to the product held by Firm X ordinarily they do not want that product If they did Firm X could settle the claims by simply passing out the product Instead the people want *other* product produced by other production groups through the services of other people Which means that for the time being they will want *money* Periodically production groups settle such claims against them by paying money to those who have provided services—paying wages weekly monthly and so on paying interest perhaps twice a year paying dividends quarterly

At this point paying money has this significance once they are paid money those who have provided services in Firm X no longer have claims worth $10 000 *against Firm X* They have $10 000 worth of claims against *all* production groups claims they can use to get product from any production group including of course Firm X

Money

Money then should be thought of as a general claim to product When you hold money you do not have a claim against *a* production group that is you do not have a right to any particular product nor must you buy a particular product You have a claim against *all* or rather *any* production groups (You have already seen and should remember that money is not the *only* form a claim can take)

The test of whether something you hold is money is whether in fact it is commonly received by people when product is created and is commonly surrendered by them when product is taken In the United States money consists of currency and of bank accounts subject to transfer by check

Money is a complicated subject Later in this volume it will be necessary to take a closer look at where money comes from and how important the amount of money available to an economy is For the present money enters the discussion only because there is usually an intermediate step (or series of steps) between the allocation of claims arising out of the creation of product and the use of those claims in taking product That is there are many steps between your performance of a day of work at the office for which you know you are entitled to a certain amount of groceries or other product and your actual receipt of that product The medium through which your immediate claim on product arising out of your day's work is transformed into your possession of product is money which is hence referred to as the medium of exchange It is the medium for the exchange of a product created for a different product taken

Hypothetically there are a number of ways in which economic activity could be carried on without a medium of exchange Firm X could simply distribute the product it holds to those who have provided services If you worked for Firm X your receipt of your share of the product would cancel your claim against Firm X Then, if you could find enough people willing to take that product, and who were willing to trade for it products wanted by you you could carry on economic activity with no money The problems inherent in such a 'barter' method would be smaller if your production group created product that were greatly in demand easily divisible and easily stored without rotting or otherwise declining in value But if your production group did nothing but paint bridges, manufacture jet airplanes or produce motion pictures *you would have difficulty staying* alive without money

Canceling of Claims

For the moment let us assume that the firm gets the money it needs by just borrowing it from somewhere" Later it will be necessary to spell out in detail just where firms get money when they need it. But for the time being it is just borrowed

For Firm X, we now have

FIRM X

Product held	$10 000	Promise to pay *lender of money*	*$10 000*

(3)

The firm still has to account for its ability to hold product. Its promise is a liability, taking the place of the people's claims against the firm which were canceled when the firm paid them money

For the people we have

THE PEOPLE

Money	$10 000

(4)

Money a claim against production groups in general, substitutes for the original claims against Firm X

Now the people buy the product from Firm X for $10 000 The exact individuals who buy the product will probably not be the same ones who provided the services to Firm X But we are interested now in the people *in aggregate* In aggregate, the people get money for producing the product and in aggregate, the people use money to get the product from Firm X

The people give up $10 000 in money to Firm X, and in exchange get the product. If we want to, we may now show for the people

THE PEOPLE

Product	$10 000		

(5)

The product has taken the place of the money But once the people have the product we are no longer interested in what they hold The product once taken by the people disappears from the record We can simply record

THE PEOPLE

(6)

which is where the whole process started The people as a whole have provided services to Firm X had claims worth $10 000 allocated to them and have used up those claims in taking the product The people no longer have any claims arising out of the creation of that product

The firm is now in this position

FIRM X

Money held	$10 000	Promise to pay lender of money	$10 000

(7)

The firm now pays off its loan using up the money and canceling the promise It too is back where it started

FIRM X

(8)

In sum the people were allocated claims for providing services and creating the product and the people used up the claims by taking the product The role of money so far is only to allow the product to be taken by persons other than those who actually provided the services and to allow those who provided services to Firm X to take some other product

All Firms Together

In the entire economy there is not only Firm X but millions of firms Each one has people providing services to it and in each case claims are allocated that are equal in value to the product produced For the economy as a whole the value of the product is still equal to the claims allocated When the people get money they still—as a group—have claims on all the product When they take all the product all the claims are used up

Assume that people contribute services to all private production groups then, and create product worth $1 million

From (9) and (10), as well as from what has been said before, it is easy to see that at any given time, *the claims held by the people will be equal in value to the product held by private production groups*

ALL PRIVATE PRODUCTION GROUPS

Hold product $1 million	Claims held by the people $1 million

(9)

THE PEOPLE

Claims against all private production groups $1 million	

(10)

As before assume that the production groups obtain money to settle these claims But in one sense, the payment of money to the people settles nothing Once they have the money the people still have $1 million worth of claims against all private production groups. Money *does* allow the people who provided services to a specific production group (such as Firm X) to take product from another group, and vice versa

Note also that the people as a whole have just enough income to buy *all* the product—neither too little nor too much This is always true, because the creation of income (allocation of claims) and the creation of product are just two sides to the same process and happen simultaneously

Now suppose the people use the money to buy all the product All the claims are canceled and the firms are left with no product

To summarize how product is taken individually, then The people provide services to production groups, and create product They are allocated claims of equal value They surrender the claims to the production groups in exchange for the product thus canceling (using up) the claim and wiping the product from the record If this process is not clear to you, go back and read the section again An understanding of this process is essential not only to what follows in the remainder of this chapter, but to all the chapters that remain

Some Complicating Factors

Economic activity is not really carried on in the oversimplified manner that was described above Later in this chapter the assumption that only the people as individuals, take product will be dropped But right here we can take a couple of steps that will move in the direction of a more realistic account

1 The argument of this section suggests that economic activity

takes place in distinct stages or periods In the account just given all people go at the same time to production groups and provide services are allocated claims and then use the claims to take the product. At the finish there are no claims left and business firms hold no product.

Of course economic activity does not take place in such distinct stages It is an endless process There are always new claims being created old claims being destroyed Business firms do not sell all their product at once nor is it all created at once People do not spend all their income at the same time Thus business firms always have some product and the people always have some claims

This complication does not affect the argument at all All the principles stated earlier still hold including the two basic propositions that (1) the value of the claims allocated is always equal to the value of the product created that is that there is always enough income to buy all the product and (2) the amount of claims held by the people is always equal to the value of the product still held by business

2 The second qualification involves the question of firms whose product is intangible and cannot be held by the firm Earlier it was said that people provide services to create product and that the firm holds the product and the people hold claims against the firm See for instance T accounts (1) and (2) But suppose the product is a bus ride a piano concert or a medical examination? These are products the firm cannot 'hold

These cases of intangible products complicate things but they do not change the basic principles There are a number of ways such transactions could be carried out Here is one of them

The firm sells the product for money at the same time the product is created but pays the employees and owners in money at a later time For instance the bus company collects fares when the bus ride is given but pays its employees weekly and its owners quarterly Since the product is taken at the same moment it is created we cannot show a T account showing the firm holding a product. Instead the record shows

BUS COMPANY

Money received as fares today	$10 000	Claims held by providers of services	$10 000

(11)

The bus company must still account for' its ability to hold assets—in this case money Those who provided services have claims against the firm—claims that will be settled when the money is paid to them

The people have *already* taken the product however so the people *as a whole* should hold no more claims against production groups than before. And that is precisely what we find

THE PEOPLE

Claims against bus company	+$10 000		
Money paid as fares to bus company	–$10 000		
Net change in claims held by the people	0		

(12)

The people hold no more claims than before, and businesses hold no more product than before So the claims held by the people are still equal to the product held by business firms And it is still true that income—the total claims created during the period—is equal to the total product created

II PRODUCT KEPT BY PRODUCTION GROUPS

Still ignoring government and the rest of the world, let us account for the product kept by the business sector When the expression ' kept by business firms" is used it does not mean necessarily that steel is kept by steel companies or eggs by poultry farmers Product may be sold *between* firms but still kept by the business sector as a whole

Business firms hold product of two general types

1 They hold *inventories*—stocks of finished products they have produced, and stocks of ingredients and supplies to be used up in the production process

2 They hold *productive facilities*—buildings land, machinery, hand tools which are used in the production process

When a firm increases its holding of product, it is said (in the language of macroeconomics) to be *investing* For the economy as a whole, *investment* is the value of the product produced and kept by business firms over a period of time, such as a year

Let us return to Firm X Suppose, again that the people provide Firm X with services and produce product worth $10 000 As before Firm X borrows $10 000 of money with which to pay the people We may repeat T accounts (3) and (4)

FIRM X

Product held	$10 000	Promise to pay lender	$10 000

(13)

THE PEOPLE

Money held	$10 000		

(14)

But now suppose the firm wishes to keep $1000 worth of product as inventory and only offers $9000 worth for sale The people buy $9000 worth of product, and the firm uses the money received to pay off part of its debt We have

FIRM X

Product held	$1 000	Promise to pay lender	$1 000

(15)

The firm still accounts for its holdings of an asset by means of a liability of equal value

For the people we now have

THE PEOPLE

Money held	*$1 000*	

(16)

Once again it may be repeated that the claims held by the people (now $1000 in money) are equal to the value of the product held by private production groups

But what about that money? Can the people spend it? The answer may be that they do not want to People as a whole do not spend all of their income Some of it is *saved* The fact that people wish to save makes it possible for firms to hold product It is equally important but less obvious, that firms' desires to hold product makes it possible for people to save

The people could just hold savings in the form of money In that case, this part of the discussion would be finished At this stage however, it will be assumed that the people may hold savings only in the form of stocks (shares of net worth) and bonds (long term promises to pay)

Firm X, then, sells $1000 worth of stocks and bonds to the people —let us say $500 in stocks, $500 in bonds When the people give up money and get stocks and bonds they still have claims but the claims now take the form of stocks and bonds, not of money The business firm uses the $1000 of money to pay off its $1000 promise We conclude with the following record

FIRM X

New Assets		*New Liabilities*	
Product	$1 000	Bonds	$500
		New Net Worth	
			$500

(17)

THE PEOPLE

Stock and bonds of Firm X	$1 000	

(18)

If Firm X had wanted to increase its holdings of productive facilities rather than inventory of its own product it probably would have to buy product from some other firm There are a number of ways it could have done this One way would be to sell all of its product but use $1000 of the money to buy product from another firm The result as you can prove to yourself by drawing the appropriate T accounts would have been just the same It does not matter whether Firm X keeps product it produced or buys *product from another firm*

T accounts (17) and (18) show once again that the claims held by the people must be equal to the value of the product held by business firms But we may now state this rule in different words Over any period of time investment (product kept by business firms) will equal *savings* (income of the people not used for buying product)

You have seen that total *product* over any period of time will equal total *income* over the same period of time because the two are created simultaneously Similarly product not taken by the people (*investment*) must equal income not spent by the people (*savings*)

All Firms Together

These equalities are better shown by considering all firms together rather than just our single Firm X The people provide services to the firms creating product worth (as before) $1 million Repeating from T accounts (9) and (10) we have

ALL PRIVATE PRODUCTION GROUPS

Hold product	$1 million	Claims held by the people	$1 million

(19)

THE PEOPLE

Hold claims against all private production groups	$1 million		

(20)

But now instead of the people taking all the product assume that they wish to save $100 000—that is they want to acquire and hold $100 000 worth of financial instruments Assume also that business firms wish to keep $100 000 worth of product We have

ALL PRIVATE PRODUCTION GROUPS

Keep product	$100 000	Claims still held by the people	$100 000

(21)

THE PEOPLE

Keep claims against all private production groups $100 000	

(22)

The claims still held by the people constitute their new savings and may take the form of stocks bonds or other financial instruments The product still held by business firms will constitute their investment over the period involved and may take the form of either inventory or productive facilities

Some Complicating Factors

Once again it is worth noting that economic activity does not take place in distinct stages as the foregoing would suggest but that this does not alter the fundamental proposition that during any time (1) savings are identical with investment and (2) income is identical with product

There are a number of other factors that must be recognized at this point however

1 Not all of the assets held by business firms are product, firms also hold financial assets And not all the liabilities and net worth of business firms are held by the people Some business firms also own the liabilities and net worth of other business firms

These complications do not affect the argument, however They represent relations among business firms within the business sector, but do not affect the relations of the business sector with the people The business firms that own the liabilities and/or net worth of other firms in turn have liabilities and net worth owned by others There may be an extremely complex network of ownership arrangements But ultimately, the total product held by business is equal to the value of claims of all kinds held by the people, and every increase in product held by business is matched by an increase in claims held by the people

2 Some firms use "retained earnings" to buy product—"ploughing back' the profits for instance, to buy new equipment They do not pay the owners of net worth in money, but keep the profits and use them for buying more assets Once again, this complication really changes nothing When there are retained earnings and the firms' assets increase, the stated value of net worth increases This increase in the value of net worth is the "pay" received by the owners of net worth Their claims against the firm have increased in value, though they receive no money The effect is no different from what would have happened had the firm paid dividends and then sold new shares of net worth to the people for money, using the money thus obtained to acquire productive facilities

3 There is one serious matter that later will require several chapters of this volume That the people save allows firms to hold product, and that firms invest allows the people to hold financial instruments Saving by the people and investing by business are two sides to the same process, and are therefore equal But that does not mean that the amount the people *want* to save and the amount firms *want* to invest must be equal If the people want to save $100 000 is there any reason why business firms might not want to invest $150 000, or only $50,000? There is no reason why the two should want to do the same thing

No solution to this complication can be offered at this time But two things may be noted First, regardless of what the people and business firms *want* to do savings and investment in any period of time *must* be equal, because they are simply two sides of the same process Second, the divergency *of what the two sectors want to do may be a source of instability for the* whole economy

III PRODUCT TAKEN COLLECTIVELY

It is time to drop the assumption that all product is taken individually For the most part, collective product is taken through government units in such forms as public education highways, military protection, and conservation of natural resources Not all collectively taken product is taken through government the Red Cross and charity-sponsored medical research do not come under governmental egis Nor is all government product taken collectively postal service and TVA power, for instance, are taken and paid for by individuals and by private production groups These minor exceptions will be ignored, and it will be assumed that collective product and government product are coterminous

There are two general reasons why some product is usually taken collectively

1 There are products that everyone uses, or can use, regardless of who pays for them For instance, if you, as an individual, want to keep disease bearing mosquitoes away from your home, you would have to spray DDT or some other insect poison all around your neighborhood You could not keep your neighbors from enjoying the benefits of this product, *even though you alone have paid for it. The same is true of defense pro*tection, most parks and highways, water conservation, and many other products To require individual purchase of such products could be unfair

At the same time, if these products are purchased collectively, each member of the community gets more benefit for his money than he could have gotten if he had purchased the product individually If you pay taxes

FIRM X

Product held	$10 000	Promise to pay lender	$10 000	(23)

THE PEOPLE

Money	$10 000			(24)

In order to buy the product from Firm X the government taxes the $10 000 away from the people. The people *as a whole* will pay the taxes including but not limited to those who provided services to Firm X. The government pays the money to Firm X taking the product for collective use so that the product now disappears from the record The firm uses the money as before to pay off the lender Just as in T accounts (6) and (8) much earlier the concluding record shows

FIRM X

		(25)

THE PEOPLE

		(26)

The outcome of the process is the same as for individually taken product. It is important to note this because there is a widespread but mistaken view that when product is taken collectively no income is created When budgets are balanced the value of claims taxed away is equal to the claims created in production of the collectively taken product.

Deficit Budgets

Return again to T accounts (23) and (24) The people have provided services and have been paid in money Firm X still holds the product, by virtue of its promise to pay the lender of money Now once again the government *prepares to take the product. But this time the government* decides *not* to tax away the $10 000 in claims created when the product was created It will not collect any taxes for the purpose of buying the product. There will be a deficit of $10 000

When government units have budget deficits, they must borrow in order to obtain money to pay for product. Having decided to have a deficit of $10 000 the government prints bonds and sells them to the public for $10 000 using the money to buy the product from Firm X We now have to record for the government

THE GOVERNMENT

		Bonds issued	$10 000

(27)

The fact that the government s T account does not balance (there is nothing on the left side) underlines an important principle For a business firm the left side and the right side must balance because a business firm has to make financial arrangements in order to hold anything in its own name The government does not have to make any arrangements of this sort if it wants product, it can tax. When the government does issue liabilities, such as bonds it does so simply because it has a deficit. Nothing is shown on the left side because the product is assumed to be used up when it is taken like individually taken product, it disappears from the record

When the firm gets money in exchange for product it pays off its debt. Just as before the firm is left with

FIRM A

(28)

But the people s record is not blank They hold government bonds despite the fact that business firms hold no product, and despite the fact that the product taken collectively has disappeared from the record.

THE PEOPLE

Hold government bonds	$10 000		

(29)

It is clearly necessary to amend the rule stated earlier Now the claims held by the people will be equal to the product kept by business firms plus the accumulated deficits of government units

The other rule still stands Total product and total income are the same regardless of what kind of budget appears in government units.

Surplus Budgets

Suppose that the budget deficit just discussed occurred last year and the people still hold the $10 000 in government bonds This year the government plans to have a surplus of $5000 in its budget, meaning that taxes will exceed expenditures by $5000 When government units have surplus budgets they buy back and cancel government bonds issued at an earlier time.

So the government imposes taxes of $5000 and uses the money to pay the people who held the government bonds The $5000 worth of govern

5

SAVING, INVESTMENT, AND CAPITAL

One ordinarily thinks of saving, investment, and capital in financial terms He thinks of "saving" as "not spending money" When he "invests" his savings, he purchases some income earning asset—usually a financial instrument of some kind—a savings account, a stock certificate or a government bond And he thinks of his "capital" as his accumulation of these instruments

The economist would agree with the individual's usage of these words But the individual might be surprised to learn from an economist that when one person such as himself saves and increases his financial capital by investing, the people *as a whole* may not be saving (or investing), and may not be increasing their capital He may also be surprised to learn that the economist often finds it useful to talk about saving investment, and capital without concerning himself at all with money and other financial instruments, focusing his entire attention on services and product

This chapter will discuss the uses made by economists of the terms "saving," "investment," and "capital" These are terms that often plague the beginning student, because he is used to thinking of these concepts as the usual individual thinks of them—in individual, financial terms There is nothing wrong, it must be repeated, with thinking in these terms—at the proper time, and for the proper purposes You must, however, change your thinking somewhat when you consider saving by the people *as a whole,* investment for the entire economy, or the accumulation of capital by an *entire society* And you must also change your viewpoints when you consider "real" saving, investment, and capital, that is, saving, investment, and capital from the point of view of services and product rather than of finance

I AN ECONOMY WITH NO GOVERNMENT

Since the activities of government units tend to add some complexity to the relationships involved we may postpone the introduction of the influence of government for a moment, and asume that all significant economic activity is carried on in the private sector We may also ignore, for the moment, economic relations with the rest of the world

Recall the relationships described in Chapter 4 In the initial period individuals provide services and create product through private production groups. The groups hold the product as inventory and the individuals are allocated claims equal in value to the product created Then the people take some of the product—but not all—surrendering part of their claims. Those claims are destroyed and an equal valued amount of product is wiped from the record since it is assumed to be consumed

The product left with business firms is of two types buildings machines tools and other "productive facilities", and ingredients, partly finished product, finished product, and other "inventory" In order to hold product, business firms have to issue financial instruments, that is, promises or shares of net worth, for the people to hold [1]

"Real" Saving, Investment, and Capital

When saving-investment relationships are examined on a "real" level, as opposed to a financial level, saving and investment are not merely equal they are identical. Two different words are being used for the same phenomenon.

For the *individual* real saving would be the product he creates, but does not use up himself On a primitive level, the best example would involve a self-sufficient farmer one who consumed only what he himself produced and who offered no product for sale. Each year such a farmer would not consume his entire harvest. He would *save* some for feed for his livestock, or for seed for the next year's crop Such unconsumed product would be *real savings* Note that the word "save" suggests that something is prevented from happening you must save *something from something* A farmer might save some of his crop from *consumption*

Saving refers, then, to keeping product from being consumed, what you have saved is your *savings*

We need not confine our view to a self-sufficient farmer to define real saving on an individual level. To the extent that an individual creates product but does not take product of equal value he is saving By not consuming *as much* product as he has created the individual has saved some product from his consumption

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[1] These promises and shares of net worth may come into the actual possession of individuals, in which case it may be said that they are held by the people "directly" Later chapters will show that these instruments may also be held "indirectly" by the people, when the instruments are owned by financial intermediaries such as banks, and when the people hold accounts at financial intermediaries.

When we shift to the *aggregate* point of view which is our major concern real saving does not change its meaning Of the total output of product by the economy over any period of time some is taken for consumption and some is saved *from consumption* A factory building may not have been built for consumption purposes so it may seem unrealistic to say that it has been saved but nevertheless it is useful to regard it as product that was saved from consumption In this sense the entire product of the economy is either consumption goods (product taken by individuals) or real savings (product *not* taken by individuals)

It will readily be seen that real savings and investment are identical In the hypothetical no-government economy the people took part of the product they had created The rest was left with business firms This left-over product constitutes real savings—product created but not taken for consumption purposes by the people This left-over product also constitutes real investment

When a single household or business firm invests it acquires some kind of asset which will provide income On a *financial* level investment involves the acquisition of financial instruments on a *real* level it must involve the acquisition of some type of product—machines buildings tools or inventories and other working capital But when a household or business firm acquires investment goods— real capital —these goods might be acquired from someone else a business firm may invest by buying a second hand machine or an old building Hence investment by one individual or firm does not necessarily mean investment for the whole economy

When we wish to measure real investment for the economy as a whole the acquisition of a second hand investment good by one person or firm is offset by the sale of the same good by someone else Hence *total* investment for the economy as a whole consists only of new production and accumulation of investment goods—newly produced productive facilities and additions to inventories All transfers of existing capital assets are netted out in adding to reach a figure for total real savings or investment

Total real saving then—product created but not taken by the people and hence left with business firms—is the same as total real investment—new productive facilities and additions to inventories *Invest* is used to indicate what was done with what was saved An individual on a financial level *saves* part of his income and *invests* in specific financial instruments On a real level the economy as a whole *saves* part of its annual output of product from consumption and *invests* it in specific productive facilities just as the self-sufficient farmer *saves* part of his crop from consumption and *invests* it in livestock feed or in seed

The Saving of Services

Real savings has been described as that part of total product that is not taken for consumption purposes but that instead is taken (or kept) by private production groups and held in the names of the groups It does no violence to the concept of real savings to view it another way

An economy such as modern America s has a tremendous capacity to produce but it is not an infinite capacity There is some limit to any country s ability to create product a limit set by the quantity of services available by the methods of production currently used and by social and institutional factors that might for instance limit the hours of work or proscribe most kinds of labor by children Over a period of time the quantity of services may increase the methods of production may change and even social and institutional factors change, sometimes reducing the amount of hours worked and otherwise reducing the capacity to produce and at other times (as during wars and other emergencies) allowing more production Yet the idea that there is some top capacity for an economy is a useful one even though the upper limit is not a precise one

How an economy uses its limited ability to produce is an important question in economics. This topic cannot be treated in detail at this point, for it constitutes the major part of the study of *microeconomics* But it can be noted that any part of the total capacity to produce that is used to augment the supply of capital goods—productive facilities and inventories—may be said to be *saved*—saved *from* production of consumer product.

Hence we may consider real savings to be a concept concerned with the use of productive services. If labor and ownership services are used to produce tractors instead of private automobiles these services are being saved from production of automobiles and indeed are being saved from the production of any possible consumer good Whenever services are used for production of productive facilities or additions to inventories the services may be said to have been saved from production of consumer product.

It is probably more proper to regard real saving as the saving of services from production of consumer product than to regard it as the saving of product from consumption since once a factory is built a machine is produced or a tool is manufactured the decision to save has already been made. The people cannot take these capital goods for consumption purposes. The decision to save involves a decision on how services are to be employed.

From this point of view the concept of real saving investment and capital may be summarized as follows

1 Productive services are *saved* from creation of consumer product and are *invested* in the creation of *capital* The distinction among the three concepts may best be indicated by defining saving as preventing something from being used up investing as what you do with what you have saved

are capital as what you accumulate as a result. This summary statement [illegible] an [illegible] relationship to what an individual [illegible] at a [illegible] level, which considers [illegible] the [illegible] he saves money from current income. It [illegible] a financial instrument, which is some part of his capital.

2. *Dissaving* is the opposite of saving. In the past, services were [illegible] from the creation of consumer product and [illegible] in the creation of capital. Dissaving [illegible] that capital [illegible] that more product is taken for consumption in the current period than was created in the current period. On an individual level, an individual may consume more than he earns by *disinvesting*—selling his financial investments and using the money to buy more product. Or, at a real level, the economy as a whole [illegible] real capital, for example, reducing inventories and using that product for consumption.

Aggregate saving and investment—saving and investment for the economy as a whole—is not simply the addition of all the saving and investing done in any period by individuals and business firms. One individual's saving may be offset by another's dissaving: one individual may produce less product than he consumes while another individual produces more product than he consumes. One individual's or business firm's investment in capital may be matched by another's disinvestment: one person may sell another person a house, one business firm may sell another a machine, and one firm may reduce its inventories while another is expanding its inventories. Total real investment for the economy as a whole is given by adding only the new production of capital goods—new productive facilities and net additions to inventories.

The Relationship of Financial to Real Saving, Investment, and Capital

Still ignoring the complications added by government and the rest of the world, consider how financial saving, investment, and capital relate, in the aggregate, to real saving, investment, and capital.

The people provide services and create product through production groups, and are then entitled to take product of equal value. The means by which this is accomplished is the allocation of claims to those who have provided services, which they later surrender when they take the product. Claims involve a financial relationship. If people have provided services to production groups but have not yet taken the product they have (in the aggregate) created, production groups are in effect "in debt" to the people—production groups "owe" product to the people. The evidence of this debt is a claim.

At first, the claim may only be an amount recorded on the firm's ledgers It nevertheless involves a financial relationship of debtor-creditor, the individual has a claim against his production group Later this specific claim may be settled by payment of money, which constitutes a general claim to product against any production group Some other claims may not be settled with money, for instance, the owner of a share of net worth of a corporation may receive, instead of a cash dividend, an increase in the book value of his share, when the firm retains profits But even in the case of undistributed profits, a claim is allocated to the people who provide ownership services

Since claims are created when product is created, and are destroyed when the product is taken, at any time the amount of claims held by the *people will be equal in value to the product held by production groups.* The claims may be considered to be "financial capital," just as the product held by the production groups—productive facilities and inventories—are "real capital" As long as government and the rest of the world are ignored, there is an exact correspondence between financial capital and real capital

Then the people take some of the product, in the process surrendering some of their claims against production groups Since the amount of claims surrendered is equal to the value of the product taken, the people still hold the same value of claims as the production groups hold in productive facilities and inventories

In order to hold some of the product, production groups issue financial *instruments—promises and shares of net worth The people will hold* part of their claims in the form of these new financial instruments, and part in the form of financial instruments issued by financial intermediaries They may acquire corporate bonds, shares of net worth checking accounts or currency savings accounts and the like Still the financial capital of the people will correspond exactly with the real capital held by production groups

When an individual adds to his financial capital, he is saving All financial saving involves the acquisition of some financial instrument—either a promise or share of net worth originally issued by a production group, or account issued by a financial intermediary which in turn reflects indirect ownership of promises or shares of net worth By using his money income to *acquire financial instruments, or by keeping the money, the individual saves* his money income from being spent on product, he saves his claims from destruction An individual's financial capital is often referred to as his savings

When an individual dissaves, he reduces his holdings of financial instruments, and takes product. He may sell his financial assets and use the money to buy product, or, since his money is also part of his financial capital, he may merely spend his financial instruments in order to take some product.

Total financial saving by the people, then, is equal to the sum of *new* financial instruments issued in the period under consideration Whenever an individual adds to his financial capital by acquiring an old financial instrument (for example, a share of net worth issued in 1954), his new financial saving will be matched by another's dissaving Only when *new* financial instruments are issued for the people to hold will the financial capital of all the people increase, only then can it be said that there is, in the aggregate financial saving

For the people as a whole to engage in financial saving someone must issue financial instruments for the people to hold For the moment, disregarding the possibility of such instruments being issued by government units or by the rest of the world, we may say that for the people to save, businesses must issue financial instruments Financial instruments issued by private production groups take two types promises (liabilities) and shares of net worth Business firms, we have seen, issue promises and shares of net worth in order to hold assets—either financial assets or physical assets When we consider businesses in the aggregate we may disregard the acquisition of financial assets—promises of others, money, and the like—because when businesses issue financial instruments in order to acquire other financial instruments the total amount of financial instruments that may be held by the people is not changed In the aggregate, businesses issue financial instruments in order to hold physical assets—productive facilities and inventories Thus, when we ignore the influence of government and of the rest of the world, there is an exact correspondence between financial saving and real saving, between financial investment and real investment

Whenever the economy as a whole engages in real saving, whenever it uses services to create real capital instead of consumption goods, the people *will be engaging in financial saving, that is, saving part of their money* income from being spent on consumption Whenever the economy as a whole is engaged in real investment, whenever it uses the services that have been saved from creating consumer product to create productive facilities and *inventories the people will be engaged in financial investment, that is, using* the money income saved from being spent on consumption to acquire newly issued financial instruments

The Problem of Consumer Finance

Someone may well raise the questions at this point, "Don't individuals themselves issue financial instruments? Don't they issue promises when they buy a car or a *refrigerator on the installment plan? And when the people* hold these consumers' promises, directly or indirectly, don't the savings of the people as a whole increase?'

To these three questions the answers are, Yes, Yes, No Yes, many individuals do issue financial instruments Yes people borrow, not only to purchase automobiles and appliances but for many other purposes as well Some individuals even issue financial instruments (borrow) in order to hold other financial instruments (buy stock certificates and the like) But, No these transactions do not result in an increase in the savings of the people as a whole

Borrowing by such people must be considered a form of dissaving—taking more product during the period than they created But the people as a whole do not borrow from other sectors They may borrow directly from each other but further as will be shown in detail in later chapters when people borrow from firms (such as banks), the firms acquire assets (the people's promises) but at the same time must issue a liability (such as some kind of bank account) for the people to hold In all such cases the saving (acquisition of an individual's promise or of a bank account) will be matched by dissaving (borrowing) by the issuer of the promise The savings of the people as a whole neither increase nor decrease

Just as borrowing is a form of dissaving on an individual level so is repayment of a loan another form of saving Repayment of a personal loan implies an individual did not use all of his income for acquiring product, and that part of it was saved

II THE INFLUENCE OF GOVERNMENT

When government and the rest of the world are ignored there is an equality among financial and real saving and financial and real investment. When we consider the influence of government units we will find that this equality between the financial and the real ceases to exist.

Business firms issue financial instruments when they add to their holdings of productive facilities and inventories But the occasion for issue of financial instruments by government units is entirely different. They issue such instruments when they have deficit budgets—when the value of product taken collectively by the people is greater than the claims surrendered by the people in taxes In other words additional financial instruments will be *left with* the people whenever the amount returned to the government in taxes is less than the amount paid to the people by government when the people provide services to create collectively taken product.[2]

Government units may be responsible for real savings investment, and increases in real capital While some product taken collectively such as police protection is used up immediately when it is taken some of it also must be classified among productive facilities Examples of publicly owned real capital are highways schools public buildings and snow plows Corresponding to these capital goods the product taken currently by the people consists of *use* of highways of education of fire protection or the administration of justice or other service requiring use of public buildings and of snow removal

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[2] It will probably be helpful to think of a deficit as an instance in which claims are *left with* the people Whenever product is created, claims are created. When the people take product individually the claims are destroyed But the government, through its budget policy has the power to decide how many of the claims created when the product was created will be destroyed when the product is taken. In the case of a deficit, not all the claims are destroyed.

When legislators and government administrators decide to build a new school or widen a river for commercial traffic they are deciding that part of the capacity of the economy will not be used to create a product for the people to consume currently In other words they are deciding that there will be real saving And they are deciding to invest this saved productive capacity in the creation of real capital so they are making real investment

There are some instances in which such real savings and investment result in corresponding financial savings and investment. For instance it is common practice for state and local government units to pay for new schools toll roads and the like by issuing school bonds or turnpike bonds They do so not because they *have* to issue financial instruments in order to hold product as a firm must the reason usually is that they wish to pay for the new capital good over a long period of time so that future as well as present users share in the costs of the project

However when there is real government investment new financial instruments need not be created and usually are not. Government units issue new financial instruments when there are deficit budgets there can be and often is government investment when government budgets are balanced or even show a surplus

Thus the activity of the government means that it is possible for real savings and investment to be greater for the economy as a whole than financial savings and financial investment.

The reverse may be true When government units engage in deficit spending as the federal government ordinarily does during war or recession the new financial instruments issued may have no counterpart in government construction of new productive facilities During World War II for instance the federal government issued $200 billion in new financial instruments During that period, the public debt —the accumulated deficits of the federal government—increased by $200 billion All of this public debt (and some more) still exists in the hands of the people Since government expenditures were mainly for military equipment most of which was used up in the conduct of war no real' counterpart exists today to the great volume of financial savings created by wartime deficits

Thus the activity of government units also means it is possible for financial savings and financial investment to be greater than real savings and real investment

Even with state and local government units, where there are "veterans' bonus bonds" as well as "school bonds," there may be financial savings and investment with no real counterpart, and where there is a "pay as you go" approach to highway and other construction, there will be real savings and investment with no financial counterpart

III THE REST OF THE WORLD

Hence, when the rest of the world is ignored, the financial capital of the people is accounted for entirely by product held by private production groups and accumulated deficits (minus surpluses) of government units Financial saving during any period is accounted for, similarly, by increases in the product held by private production groups, plus deficits (or minus surpluses) of government units The real capital of the economy consists of productive facilities held by private production groups and by the people in common (that is, by government)

However, the rest of the world can no longer be ignored Unfortunately dealings with the rest of the world complicate the analysis of macroeconomic relationships somewhat

The Financial Side

The financial side of the effects of relations with the rest of the world is fairly straightforward and uncomplicated

When other countries take product from the United States, the effect on the people's saving is precisely the same as when the business sector keeps product as productive facilities or inventory In both cases the people create product and are allocated claims, and in both cases the claims are left with the people Product taken by the rest of the world, in short, means increased financial savings for the (American) people

In practice the transactions could be extremely complex For a simplified illustration assume that the people provide services and are paid in money and that they use this money to buy foreign bonds Foreigners then use these dollars to buy product created through the people's services The increase in the people's financial capital takes the form of foreign bonds

Similarly, when Americans take product from the rest of the world, there is financial dissaving by the people In practice the transactions could take a number of forms Perhaps Americans will simply pay U S money to foreigners, and the foreigners will keep the money Or perhaps foreigners will redeem foreign bonds previously issued, and Americans will buy foreign product with money obtained by surrendering foreign bonds. In the latter case Americans would in effect have traded foreign bonds for product.

Of course Americans both buy from and sell to those in other countries. Whether the people's savings will increase or decrease on balance depends on whether more is taken from or by the rest of the world. The relationship may be put very concisely in terms of the *net* product taken by the rest of the world, which is defined as product taken by the rest of the world minus product taken by the United States from the rest of the world. *The increase in the people's financial savings will always be equal to the net product taken by the rest of the world.* If the rest of the world takes $1 billion more in product from the United States than we take from abroad, the people's savings will increase by $1 billion. Net product taken by the rest of the world can be negative too. If we take $2 billion more in product from the rest of the world than is taken from us, the financial savings of the people will decline by $2 billion.[3]

The Real Side

The real side of the effects of relations with the rest of the world, by contrast with the financial side, is too complex for detailed treatment here. Instead of systematically exploring the relationships, we will be content with two summary statements, together with an illustration.

1. When there is financial saving (or dissaving) arising out of relations with the rest of the world, there *may or may not be* corresponding real saving (or dissaving).
2. When there are economic relations with the rest of the world, real saving (dissaving) may not even equal real investment (disinvestment).

Suppose the United States takes $1 million worth of product from the rest of the world, so that the people's financial savings decline by $1 million. If the *people* take this foreign product (for example, in the form

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[3] This account is not completely accurate, but the complication can, for all practical purposes, be ignored. When American firms add to their holdings of productive facilities and inventories, the financial savings of the people should increase according to the analysis of section I. But it will readily be seen that if the product taken by American firms is purchased from abroad, American firms will issue new claims for foreigners to hold, and the people's savings will not be affected. Hence there can be real investment in the United States without financial savings here. Secondly, the above paragraphs assert that when product is taken from the rest of the world, the American people's savings will decline. But—once again—if the product taken from abroad is kept by American firms, there is no reason for the people's saving to decline, since the product taken from abroad is "paid for" by new claims issued by American firms to the rest of the world. These two exceptions precisely offset one another. It still holds that the financial savings of the American people will be increased by increases in business holdings of product, plus government deficits, plus net product taken by the rest of the world. In the case cited, investment is offset by negative net product taken by the rest of the world.

IV SAVINGS, INVESTMENT, AND CAPITAL IN PERSPECTIVE

It is necessary, then, when using the expressions "savings," "investment," and "capital," to be certain whether the terms are being used in an individual sense or an aggregate sense, and whether the reference is to the 'real" or the "financial" Only infrequently are these modifiers actually used, usually they are simply "understood" When you hear the words spoken or see them in print, be certain you know what the 'understood" modifier is

For instance, you may see a sign on a building reading *Investments* Investment firms are concerned, you may be sure, with individual financial investment A savings bank deals in financial, not real savings

Net product taken by the rest of the world is often called net foreign investment Once again, the investment is financial but this time the reference is to the aggregate And when those who study international trade and finance are concerned with what they call capital movements they refer to financial capital

When the topic under discussion is aggregate economics that is, when people are talking about total product, total saving employment and unemployment, and the like, then you may be sure that the terms "saving" "investment," and "capital" are being used in the aggregate and not the individual sense But you still cannot be certain whether the reference is to the "real" or the "financial"

Common practice in aggregate economics is to use the word "investment" in the *real* sense That is, when a government official is talking about the state of the economy, and he refers to the level of investment, he is referring to the increases in product held by businesses In this book, the word "investment" is used in the same way (unless otherwise specified) Hereafter, investment will be used to mean the product kept by the business sector

And common practice is to use the word "savings" in the *financial* sense The government official, when he refers to savings is referring to the increases in financial instruments held by the people The same practice will be followed in this book

If it is said that *investment* and *savings* are equal during a period of time, what is meant is that increased holdings of product by business and increased holdings of financial instruments by the people were equal This can only be true when there is no effect by other sectors, that is, when government budgets are balanced, and when *net* product taken by the rest of the world is zero, or when the effects of government and foreign transactions precisely offset each other.

The Financial Side in Perspective

Those who provide productive services to create product take benefits of equal value and they may take these benefits in two ways they take product and they acquire financial instruments The financial instruments acquired by the people during any period of time may take many forms and shapes shares of net worth are financial instruments, so are bonds notes and other promises and so are the accounts issued by various types of financial intermediaries such as savings and checking accounts

The acquisition of financial instruments by the people means the same thing of course as financial saving which in the rest of this volume *will be referred to simply as* saving *If you save acquiring financial instruments* you are not taking all the benefits of your economic activity in the form of product someone else—a business firm the rest of the world *or the people collectively through government—is taking product and you* acquire a financial instrument

As an individual you can decide (within limits imposed by your income and the like) how much money you will hold If next month you want to hold twice as much money as you hold today you can probably arrange to do so by adjusting your spending or by selling some of your assets But the fact that you as an individual can decide how much money you are going to hold does not mean that all the people together can decide how much money all the people will hold At any given time there is only so much money in the economy and the amount of money held by people businesses and so on cannot be greater or less than that amount

Similarly you may decide how much you want to save That is you may decide what part of the benefits of your services you wish to take in the form of product and what part you wish to take temporarily or for long periods of time in the form of U S Savings Bonds money shares of net worth and other financial instruments But again all the people together do not decide how much they will save[5] They do not decide the amount of financial savings they will acquire just as they do not decide how much money they will hold

The people can only acquire the financial instruments that are issued by business firms government and the rest of the world and those who do the saving—who acquire the financial instruments these groups issue—*do not decide on the amount of new savings to be provided in any period of time* These decisions are made in the main by the officials of business firms when they decide to acquire new assets and by the administrative and legislative *branches of local state and federal governments when they decide* on the size of taxes in relation to payments to people To a lesser extent as far as the United States is concerned the amount of savings the people may acquire is also influenced by international trade when it is determined how much net product (plus or minus) the rest of the world will take from America

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[5] This suggests that the amount people save and the amount people *want* to save may not be the same Both the amount people save and the amount they want to save are important though as Chapter 13 will show

That there is only so much savings to go around is often a startling fact but it is nevertheless true Because what is true on an individual level is often erroneously thought to be true of all people together and because your own experience has been (of course) only on an individual level it might apear to you that the amount of saving done in any period is determined by the people through individual decisions But you can save only by acquiring a financial instrument and you can acquire a financial instrument only if one is issued And you do not decide whether one is to be issued [6]

While the people do not decide how much savings they will acquire they do by and large decide the form in which they will acquire savings There are many types of instruments from which to choose stocks and bonds savings and checking accounts shares in mutual and pension funds There are arrangements in the economy that come close to permitting any person who saves to hold his savings in whatever form he desires A closer look at these financial arrangements will come in Chapters 7 8 and 9 But deciding the form in which the people will hold savings is quite different from deciding the *amount* of savings they will acquire And that latter decision is made by others

The Real Side in Perspective

There remain some knotty questions concerning the real side of saving investment, and capital involved with what has been known as capital theory ’ in economics

The questions to be raised are Why is there capital? That is why do firms find it useful to hold product? And if they do find it useful what *limits* the amount they hold? That is, why do they not hold more? And since product held by business usually wears out after a time, why is it said that capital is 'permanent?'

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[6] A preview of some of the analytical problems to come is provided by what seems to be an exception to the above rule Suppose the people go to production *groups, and* provide services for which they are paid Now people decide to save 20 percent of their income and *refuse* to take the product. People hold unused claims (savings) corresponding to new product held by businesses (investment) and the people have decided how much to save *But* the success of the people in deciding how much they will save can be only temporary Businesses usually are not happy with unintended increases in inventories and will act quickly to cut them down—either by not producing as much themselves or by not ordering as much from other firms. The result is that product created and income created both decline and unemployment results and people correspondingly reduce their attempts to save Ultimately businesses will be successful in investing only what what they want to invest. The case is complex though and full treatment is provided in later chapters.

I. THE PRODUCTIVITY OF CAPITAL. The fact that production groups —any person or organization that produces product—holds capital is explained by one simple principle it is often more productive to produce products that produce final products than to produce final products directly. More books can be made by producing linotype machines, printing presses, and the like than can be made by using the same resources to produce books directly Indeed, capital goods are used in the process of making linotype machines and printing presses, making the process of making books even more efficient

Austrian economists around the turn of the century identified capital with roundabout" methods of production, and the term is very descriptive of the use of capital "Roundabout" methods are often more productive than *direct ones*

Perhaps this productivity can be seen more clearly in an extremely primitive example Suppose a self sufficient man, standing by a mountain stream, can catch a fish with his hands on the average of once every four hours Twelve daylight hours give him three fish, and hence sustenance *But if he could spend twelve hours making a net, he might be able to catch* a fish every hour, or even more frequently By making a product to create a product (making a net help him catch fish), he increases his ability to catch fish The process is roundabout, it is also more productive than direct processes

The primitive example also suggests why there is a limit to the ability of production groups to use capital Roundabout methods take time and use resources, it took twelve hours of the fisherman's effort, for instance to yield one net The time and resources devoted to "capital formation" may in some instances, not involve any sacrifice The fisherman, for instance may have used after dark idle hours for producing his net But there is a limit to the resources that can be used for the creation of capital without sacrificing consumption

More likely, the fisherman was permitted to spend time working on a net by virtue of a fortunately heavy catch of fish one day, which gave him a "day off" the next day for working on the net With a day off, the fisherman had to decide whether to use his limited time adding to his consumption goods, for example, picking berries or to use it creating capital Picking berries involves more consumption immediately; creating productive capital involves even more consumption—but at a later time when the net is completed The fact that capital means the postponement of consumption, that there is a sacrifice, means that there is some limit to its fruitful use The advantage of extra productivity has to be balanced against the sacrifice of postponement of consumption

Similarly, in an exchange economy, creation of capital may not involve a sacrifice of consumption, if the resources used for capital creation could not or would not have been used for creation of consumption goods Or the sacrifice of consumption may be slight, if the resources are far better adapted to production of capital goods. But there is a limit to the resources that can be used for the creation of capital without sacrificing consumption This does not mean that an economy that increases its rate of capital formation must experience an actual reduction in consumption, instead part of the *increase* in output capacity of the economy may be used for creating capital goods instead of consumer goods so that additional consumption is enjoyed sometime in the future instead of immediately Added productivity is the benefit that encourages the use of capital in production processes, the use of resources for capital creation ordinarily means that fewer resources can be devoted at the same time to production of consumer goods Thus, there are also sacrifices involved in capital creation, limiting the use of capital

II THE "PERMANENCE" OF CAPITAL Note that "capital" and 'capital goods" are not synonymous When an economy *saves* by not using all its productive resources for production of product to be consumed, and *invests* the saved productive capacity in new *capital* by adding to the stock of inventories and productive facilities it also has new capital goods which are the inventories and productive facilities But once the saving has taken place, the capital is permanent (unless at a later period there is real dissaving), even though the capital goods can wear out in use

Or, putting the paradox another way Suppose a firm adds to its assets by *acquiring $100,000 worth of product, in the form of a machine.* The people's financial capital increases by a value of $100 000 Years later the machine may have worn out, but the financial capital is still held by the people And the real capital is still held by the firm[1]

The key concept in explanation of this fact is *depreciation* Suppose a firm acquires a machine costing $100 000, at the same time issuing new financial instruments worth $100 000 to allow it to hold the asset The machine, it is assumed, has a productive life of five years, and it wears out so evenly over this period of time that after one year it is worth (and may be sold for) $80,000, after two years, 60,000, and so on (This is the kind of estimating problem facing accountants We will assume that these amounts are not estimates, but exact measures)

Assume also that the machine accounts for an output of $30,000 per year in final product, to be sold to another firm, to the people, to government, and so on

Can it be said that during a year $30 000 worth of product has been *created*? *Product worth $30,000* has been produced and sold, but at the same time, product worth $20,000 has been "used up"

Of the $30 000, $20 000 is "depreciation" It represents $20,000 worth of wearing out of product (a capital good) and at the same time $20,000 worth of product sold New product created is only worth $10,000; and only $10 000 worth of claims will be allocated for ownership income, representing a 10 percent return on the original $100,000

The $20,000 in revenue that has been called depreciation can then be used to acquire some other asset worth $20,000 A new capital good may be acquired, but the firm does not need to issue any new financial instruments

During each of the five years of the life of the machine, there is $30 000 worth of final product sold, but only $10,000 each year in new product created After the five years are up the original machine is fully worn out, and scrapped, but the original $100,000 in capital remains intact, because each year new goods have been acquired with the annual depreciation *of $20 000 The goods wear out, the capital is permanent*

Hence over a period of time, capital goods—machines, buildings, and the like—can "reproduce" themselves, in a sense Or, instead, a firm can gradually take its old machines and "turn them into" new, more efficient, up to date machines without having to issue new financial instruments

6

AGGREGATE INCOME: MEASURING ECONOMIC ACTIVITY

You have seen what is meant by income' on an individual level the claim to product or the product itself received by an individual in exchange for his productive services And you have seen what is meant by product ' on the level of the single production group the value added" by the group to a final product sold to the people individually or collectively, sold to the rest of the world or kept by businesses

It is time to turn to total or aggregate income—the income received by all persons in an economy during a period of time, and to total or aggregate product the entire output of an economy during a period of time, the product of all production groups

I THE CONCEPT OF AGGREGATE INCOME

For the individual, it will be recalled, his claims to product have a value equal to the value of his services, that is, to the value of the product he creates The individual can take as much product as he creates The value of the services he provides and the value of the product he can take are the same

Yet the individual can make a distinction between the product he takes and his income He may be paid $100 a week, but only take product worth $90 each week, saving the difference He may also surrender some claims in taxes when product is taken collectively For the individual, then, there can be a distinction between product created (service) and product taken

Equivalence of Services and Product

For the economy as a whole this distinction clearly disappears The economy as a whole—all four sectors—takes the product created For the economy as a whole the value of services must be the same as the value of the product During any period of time then the claims created and the product created have equal value for the economy as a whole

This makes it possible to measure aggregate income in two ways You can measure aggregate income by counting how much each person gets paid for the provision of his labor and ownership services—adding up wage and salary payments interest dividends rents and so on Such a measure would give you 'income as usually thought of and would consist mostly (but not entirely) of money payments to people Or you could measure aggregate income by counting how much product was created—either by counting the total product *created* by each production group or by counting *the product taken by each of the four sectors Such a measure would give* you income in terms of product rather than in terms of claim to product

A Simple Economy

For example suppose you are to measure total income in a simple economy consisting of a few hundred persons and three large production groups The three groups all business firms are a farm to supply food and fiber crops livestock and lumber, a processor and manufacturer, to convert the raw materials provided by the farm into finished goods, and a distributor to transport and sell the product to the ultimate buyers

Total income will be arrived at in three ways by adding up (1) the claims allocated by each of the three firms, and (2) the valued added by *the three firms, and (3) the total product taken by the four sectors of the* economy These additions are made in Table 6 1

During the month under review, the farm creates product worth $1000 *consisting of raw materials* Claims worth $1000 *are allocated to* those providing services, so we enter $1000 in the column headed claims allocated At the same time $1000 is also entered in the column headed value added indicating the product created by the first production group

The farm however must keep $100 worth of the product as seed, feed grain and the like Under 'product taken" $100 is entered as business investment.

The remaining $900 worth of product is sold to the processor manufacturer From the raw materials this firm fabricates $2000 worth of finished goods adding $1100 to the value of the finished goods Hence $1100 is added in Table 6 1 under 'value added and since $1100 worth

TABLE 6.1

THREE WAYS OF MEASURING TOTAL INCOME

Claims allocated		*Value added*		*Product taken*		
By farm	$1,000	By farm	$1,000	I. By the people From distributor		$1,900
By processor manufacturer	1,100	By processor manufacturer	1,100	II. *By business*		
By distributor	350	By distributor	350	By the farm $100 product kept, $50 from processor manufacturer and $50 from rest of world	$200	
Total claims allocated	$2,450	Total value added	$2,450	By the processor manufacturer $100 product kept, $50 from rest of world	$150	
				Total		350
				III. *Net product taken by rest of world*		
				Product taken by ROW	$300	
				Less product taken from ROW	$100	
				Net		200
				Total product taken		$2,450

of claims must be allocated to those who provided services $1100 is also added under "claims allocated."

There is now $2000 worth of finished goods. The processor-manufacturer keeps $100 worth, as productive facilities and inventory, and sells an additional $50 worth to the farm in the form of plows, pumps, and so on. So an additional $150 goes under "product taken" as business investment—$50 worth as taken by the farm and $100 worth as kept by the processor-manufacturer.

There remains $1850 worth of finished goods which are sold to the distributor. By transporting and retailing the product, the distributor *adds another $350 to the value of the product. Assume that the distributor* has sufficient inventories and productive facilities already, and keeps none of the product this time It may sell the entire $2200 worth to the people and to the rest of the world

Add then $350 to both "claims allocated" and to 'value added," to show the product created by the distributor The people (individually and collectively) take $1900 worth of the product, so add that amount to "*product taken* '

But to complete the picture, it is necessary to take account of product taken from the rest of the world Assume that the farm takes $50 worth of product and the processor manufacturer takes $50 worth of product from the rest of the world Both these amounts must be added under 'product taken by business", and their sum $100 is deducted from product taken by the rest of the world to arrive at *net* product taken by the rest of the world *of $200*

Total claims allocated are $2450 Total value added by production groups is identical $2450 Adding up the product taken by the people and by business together with the net product taken by the rest of the world also gives a total of $2450, as indeed it must

The example shows that claims allocated must always be equal in value to the product created It also shows, once again that this is true regardless of whether "product created ' is interpreted as meaning the value added by each production group or the value of *final* product sold to the four sectors

Some other useful points may be gleaned from the example Can you tell from the information given how much savings—new financial instruments—was created for the people to hold during the period?

In the first place product held by business increased by $350 implying $350 worth of savings going to the people Second, the rest of the world took net product worth $200, implying another $200 worth of savings going to the people So far, then savings are $550

New financial instruments are also created when government units *have deficit budgets What financial savings were created in this example,* by government units?

You cannot tell Part of the $1900 taken by the people, it was said, was taken collectively Assume that $500 worth of product was taken collectively That still does not answer the question of whether there was a balanced budget, a deficit, or a surplus The necessary information is just not provided by the example All you can say is that the new savings held by the people will be $550 plus any deficit or minus any surplus in government budgets

The point is that in the measurement of aggregate income, whether government units have deficits, surpluses, or balanced budgets does not matter In adding up total product taken, you will add in $500 taken by the people collectively, regardless of the amount of taxes collected In adding up total claims created and allocated to the people, you will add in $500 worth of claims created and allocated to those who created the collectively taken product, regardless of whether there are also $500 in taxes

Other important points raised in the example will be discussed as the chapter proceeds

What Aggregate Income Is Not

The definition of aggregate income is straightforward and simple it is the value of total product created during a period of time, it is also the value of all claims allocated over the same period of time

Yet this straightforward and simple definition usually does not prevent some problems from arising, and some mistakes from being made, in thinking about the actual counting of aggregate income For that reason, it is useful to spell out some things that aggregate income is *not*

1 AGGREGATE INCOME IS NOT TOTAL SALES If in the simple economy example you added up total sales, you would get $1000 worth of sales by the farm, $2000 worth of sales by the processor and manufacturer, and $2200 worth of sales by the distributor, or a total of $5200 in sales In adding total sales, you would be adding the same product over and over again, first when it is sold by the farm, then when resold by the processor manufacturer, and finally when it is sold by the distributor

In the actual measurement of income, you can measure total sales of final product, which is what you do when you add up product taken by the people, by business, and net product taken by the rest of the world You do not count intermediate product, such as raw materials sold to the processor manufacturer, as part of total product To do so would be "double counting"

In practice, the distinction between intermediate product and final product is not as easily made as the example would suggest Raw materials sold to a processor are obviously intermediate product But what about an executive's country club membership for which dues are paid by his company? Even this would probably be considered intermediate product, since the firm counts it as an expense of doing business, and includes it in the price of the product it sells If you buy a car from such a firm, the executive's golfing time is included in the price of your car, and to count them both would be double counting On a conceptual level, the distinction between intermediate and final product is clear, but in actual measurement the rule as to what is called an intermediate and what a final product must be fairly arbitrary If the firm decided to stop paying the executive's country club dues, but raised his pay $750 a year so that he could pay them himself, the $750 would be called a claim allocated by his firm and the country club membership would be counted as a product taken by the people The change would result in a $750 increase in total income

The Department of Commerce has fairly complex rules covering what should be counted by them as intermediate product and what as final product These rules are close to but not the same as the rules of the Internal Revenue Service when the latter decides whether payment of country club dues entertainment and travel expense, and the like, is a legitimate business expense

One knotty problem in distinguishing intermediate product from final product is posed by the government sector When a firm buys a postage stamp pays to use the highways pays taxes that support its use of military protection sanitation and so on, these costs are reflected in the price of the final product it sells To the extent that government provided product is used by business in the production process, it should be called intermediate product But postal service, highways military protection, sanitation and so on are also used by the people, and to the extent that they are should be considered final product

There is no way of dividing up government provided product between business and public use In practice, the Department of Commerce considers *all* government product to be *final* product Even production related projects such as deepening and widening a river channel for ocean sized vessels is considered to be "product taken collectively by the people" All product taken by the government is counted in measuring total income

II AGGREGATE INCOME IS NOT TOTAL BENEFITS Once again, it is important to note that there is no economic activity without exchange A paid housekeeper creates a product, 'housekeeping,' and is paid for what she does Her activities enter into total income A housewife may do the same thing creating the same benefit, but her activities do not enter into total product Similarly you may buy a high fidelity amplifier for $100, that amount of $100 is entered as claims created (at the point where the product was created) and as product taken by the people The same *benefit* may be created if you buy an identical amplifier in kit form for $50, and assemble it yourself But only $50 worth of income and product are recorded Do it yourself activities do not enter into total product

The *rule* then, is that there must be exchange for the benefit to be included in aggregate income measures There are however two *exceptions* to the rule.

a '*Housing*" Rigorous application of the economic activity only rule would mean treating rented houses and apartments differently from housing owned by the occupant The former would involve regular receipt of ownership income (rent) by the landlord, and regular creation of the product, "housing," by him The latter would involve no ownership income, no creation of product

One trouble with applying the rule so rigorously is that if you were renting a house at $100 per month, and then decided to buy the house, total income would fall by $100 per month Moreover, throughout the economy, as more and more people own their own homes instead of renting (as is happening in the United States) total income would regularly and gradually decline

To prevent these distortions, the Department of Commerce has decided to treat rented and owner occupied homes in the same way *All* homes are treated as rented

In order to do this, a simple fiction is employed It is assumed that all owner occupied homes are owned by production groups Instead of saying that Mr Jones owns a house, the Department says that there is a production group of this sort

The house owning firm creates and sells to Mr Jones the product "housing" That product (the value can only be estimated) is counted as product taken by the people Mr Jones also earns ownership income (counted as rent) from his ownership of the house owning firm

This exception implies two important changes in the counting procedure· (1) The product taken by the people is "housing," not houses New houses are not counted as consumer product And (2) correspondingly, a new house (or other home), whether acquired by a landlord or by the occupant, is counted as "investment"—as product taken by business

b *Farm products* Some farm products are not sold by the farm, but are kept on the farm, for consumption by the farmer and his family Strictly speaking, this sort of production for your own consumption is no different from other do it yourself activity, and rigorous application of the economic activity only rule would mean that it could not be counted in total income

But once again, the strict rule could cause distortions, especially when you try to compare total product of two countries, one of which has a considerable amount of "subsistence" agriculture, and the other where agriculture is almost entirely "commercial"

The answer is similar to that employed in the case of housing The farmer and the farm are thought of as being entirely separate The farm is a production group, whose net worth is owned by the farmer Instead of saying that the farmer consumes what he produces, the statisticians say instead that

> The farmer provides ownership and labor service to a production group—the farm—and is allocated claims Some of these claims are canceled when the farmer receives money, corresponding to the portion of the crop sold to others Some of the claims are used to take

the agricultural product itself *All* the product is treated as if it were sold, and all the claims are counted as claims allocated

III AGGREGATE INCOME IS NOT WEALTH Total product created during a period of time, and total claims allocated over the same period of time, constitute that period's aggregate income You must be careful to distinguish current income from production in a *past* period, and from claims already held

For instance, if you sell a used car for $500, the $500 is not income because the car is not new. You previously held $500 worth of car, you now hold $500 worth of money

You can buy something without having earned income during the same period Suppose you decide to buy a washing machine You go to your bank, turn in a savings account you have held for years and get money Or you just use money you have held for some time. Your savings account is not income, nor is the money you have held (although you may have held this financial capital by virtue of income received in the past), these assets constitute part of your wealth And the money you might get in exchange for your savings account, like the money you might get in exchange for a used car is not income, it represents a change in the form in which your wealth is held

While the economy as a whole—all four sectors—can take only as much product as it creates the same is not true of an individual, or even of a sector The fact that you as an individual can buy something may or may not mean that you have received income during the period

IV AGGREGATE INCOME IS NOT MONEY RECEIVED It should also be clear that aggregate income during a period is not the same as the total amount of *money* received by the people during that period Not only do people receive money payments that are not income payments, but some income is received in forms other than money

a People can receive money without creating product, and those receipts of money cannot be counted as ' income " It has already been noted that people can receive money when they sell old assets Besides this, people can also receive gifts of money, social security benefits, scholarships veterans' bonuses, and other payments where no service is involved All such payments, involving receipt of money but no concurrent productive service, are called *transfer payments*

Transfer payments, as explained in Chapter 2, consititute a large portion of total federal government expenditures Figure 2 4 showed that in 1963, total federal government expenditures were $115 2 billion, of which only $64 7 billion consisted of product taken collectively Only the $64 7 billion would be counted in total product, the remaining $50 5 billion consisted of transfer payments one arbitrary practice of the Department of Commerce in computing aggregate income—a practice that you may regard as an exception to the definition of income or as a perfectly valid interpretation of the definition depending on your point of view

If you own a corporate bond and receive interest that interest is counted as income and included when total income is computed The interest is your pay for ownership service If you own a municipal bond —a promise of a state or local government—the interest you are paid is likewise considered to be income But if you own a government bond — a promise issued by the federal government—the interest you receive is considered to be a transfer payment

The reason for this practice is usually given as follows Ownership of bonds issued by firms ordinarily corresponds to the ownership by the firms of some productive asset—some capital good Moreover the ownership of a municipal bond also ordinarily (but not always) corresponds to the ownership by a state or local government of a capital good such as a highway a school or a courthouse These capital goods owned by firms and by state and local governments are thought to be productive and to account for the existence of ownership income

But as explained in the previous chapter federal government promises do not correspond to any capital good Ownership of them is not thought to contribute to the productivity of the economy Hence the interest paid is not thought of as income[1]

b A second difference between money receipts and income is that some income does not take the form of money payments A partial list of types of nonmoney income should suffice to demonstrate the point

> Some people are paid in kind for their services Waitresses get free meals bank clerks get low interest loans railroad employees get free trips and so on
>
> Almost all providers of labor services get fringe benefits of some kind as well as pay in the form of money Included are company-operated cafeterias the employer s share of social security contributions and of pension fund plans the office party and the company bowling league and the like All of these must be counted as income
>
> If you hold a savings account interest will probably be added to your balance four times each year Such income may be earned indefinitely without your receiving any money In effect your pay takes the form of increases in your savings account not money
>
> Similarly if you own a share of net worth of a firm that has made a profit but does not pay you in money (pays no proprietor s income partners income or dividends) your pay takes the form of an increase in value of the share of net worth you hold

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[1] This practice does not solve the problem however Ownership service in the private sector is tied to the existence of productive capital goods But productive capital goods owned by the federal government are entirely ignored

Besides these examples nonmoney income recorded by the Department of Commerce also includes (as explained earlier) the value of farm products consumed on the farm and the annual "rent" a homeowner is assumed to pay to himself

II THE PUBLISHED MEASURES OF TOTAL PRODUCT

In the United States total income is measured and reported by the Office of Business Economics of the Department of Commerce. The Department publishes two (or three depending on how you count them) different total income records one (or two) of which measures total product taken by the four sectors the other recording total claims allocated to the providers of productive services As shown earlier these two approaches are simply two ways of measuring the same thing

Measuring Product Taken

The measures that report total product *taken* by the four sectors are called *gross national product* and *net national product* They are computed by adding up the following

I FINAL PRODUCT TAKEN BY THE PEOPLE INDIVIDUALLY Sales to this sector include such products as food appliances automobiles medical service private education, and so on. Houses bought by the people are *not* included but housing is including the "imputed rental value of owner occupied dwellings Also included is that portion of farm production consumed by the farmer and his family Where the product was produced is not considered so product taken by the people can include domestically produced and imported product (including such "imports" as product bought abroad while on an overseas trip)

II. FINAL PRODUCT TAKEN COLLECTIVELY, THROUGH GOVERNMENT UNITS. As already noted the product taken by the "government sector" (sometimes called the "public sector" to distinguish it from all other sectors that together are called the "private sector") is not the same as the sum total of all government budgets because transfer payments are excluded. Collectively taken product does include such items as defense expenditures school construction and operation highway construction, government salary payments, and the like. All product taken by the people collectively is considered to be final product. Again, no distinction is made between products created domestically and products imported from abroad.

III ADDITIONS TO BUSINESS HOLDINGS OF INVENTORIES AND PRODUCTIVE FACILITIES or domestic private investment, as it is often called. As explained in Chapter 5, when an existing capital good wears out but its depreciation pays for a new capital good to replace it that new capital good is not new product and should not be counted as part of total product or total income There are because of the existence of depreciation *two* measures of investment *gross* investment includes all new inventories and productive facilities without making any adjustment for the capital goods used up in the production process *Net* investment includes the same goods but with the value of the goods used up in production subtracted In other words net investment is gross investment minus depreciation (or minus in the language used by the government capital consumption allowances)

Which of the two figures *should* be used? There are arguments for and against each of them *Gross* investment can be counted but since there is no way of counting actual capital consumption the figure for *net* investment is only an estimate The gross figure then is more accurate But on the other hand only *net* investment is new product so *gross* investment actually overstates the amount of product taken by business

Once again in computing gross private domestic investment or net private domestic investment no distinction is made between imported and domestically produced goods

IV NET PRODUCT TAKEN BY THE REST OF THE WORLD also referred to as net foreign investment This last item included in total product is in a sense an adjustment made necessary because of the existence of international trade

The Department of Commerce is not really interested in total product taken it wants to measure the value of total product *created* in the United States One way to measure this would be to count only domestically produced product taken by the people by business and by government and to add to that *all* product taken by the rest of the world For instance in Table 6 1 the statisticians measuring total product in the simple three firm economy would measure $1900 product taken by the people only $250 taken by business (imports worth $100 not being counted) and $300 worth of product taken by the rest of the world The total income measured this way would still be $2450

But this way of measuring income is not convenient in practice because it is too difficult to distinguish between imported and domestically produced product taken by the first three sectors

So imported product is included in product taken by the people by business and by government If the product taken by the rest of the world were exactly equal to the product imported by these three sectors no adjustment would be necessary Product created and product taken would be equal with any product taken from abroad being exactly offset by product created here but taken abroad

But international trade does not in any given year balance out so evenly, and an adjustment is virtually always needed If total product created exceeds total product taken by the first three sectors because net *product has been taken by the rest of the world then the net product taken* by the rest of the world must be added under 'product taken' to be a valid measure of total product

Net product taken by the rest of the world can also be negative, *whenever the United States takes more product from abroad than the rest* of the world takes from us

Note that no adjustments of this sort have to be made when counting total claims allocated as in Table 6 1 Total claims allocated will always *be equal to total product created*

Gross National Product and Net National Product

When you add the product taken individually by the people, gross business investment product taken collectively, and net product taken by the rest of the world for any given year, you get gross national product or GNP If you substitute net business investment you instead get net national product or NNP

NNP is in theory, a better measure of economic activity, since it includes only *new* product created But since actual capital consumption cannot be measured but only estimated NNP is not as exact a measure as GNP For most purposes it does not matter which you use as long as you remain consistent GNP and NNP grow at about the same rate, in recessions they decline by just about the same amount

Table 6 2 below shows in summary form Department of Commerce figures for GNP and NNP for 1963

This summarized presentation of GNP and NNP is useful for many perhaps most macroeconomic purposes. But considerably more detailed records are available which can tell you for instance, what the people spent for jewelry or for shoe repair, how much state and local governments spent for operation of jails and prisons and the like Refer to Figure 2 2 for a detailed review of product taken individually by the people, or to Figures 2 3 and 2 4 in that same chapter for a more detailed account of what kind of product was taken collectively

Measuring Claims Allocated

The other measure of total income presented by the Office of Business Economics of the Department of Commerce is a measure of claims allocated to those who provide labor and ownership services, and is called ***national income***

The reported national income, or NI, measure is broken down by

TABLE 6 2

GROSS AND NET NATIONAL PRODUCT, 1963

(billions of dollars)

I Product taken by the people individually		374 9
Durable consumer product	$ 52 1	
Nondurable consumer product	167 5	
Intangible product (services)	155 3	
II Net business investment		31 2
New home construction (nonfarm)	25 2	
Other new construction	21 3	
Productive facilities	31 0	
Increase in inventories	4 4	
Total Gross investment	82 0	
Minus capital consumption allowance	50 8	
III Product taken collectively		122 6
Federal—defense	55 2	
Federal—nondefense	9 5	
State and local	57 9	
IV Net product taken by the rest of the world		4 4
Product taken by the rest of the world	30 7	
Minus product taken from the rest of the world	26 3	
Total net national product		533 1
Gross national product		583 9

Note Because of rounding, detail may not add to totals
SOURCE U S Department of Commerce

type of income—that is, by type of service rewarded But a few words of caution are necessary, because the labels can be easily misinterpreted

It would be useful to have a breakdown between claims allocated for labor services and claims allocated for ownership services Unfortunately, such a record is extremely difficult, if not impossible, to prepare *One example should make clear* why

Suppose two men go into business as partners each putting up $5000 to acquire assets They operate a small printing firm, and employ a dozen other persons One partner becomes manager of the "front office," being responsible for sales, keeping records, and so on The other supervises the "shop"—the typesetting, composition, printing binding and so on

At the end of the year they find they have paid $60,000 to employees and paid another $40 000 for materials, rent, power and gas, and so on, for total costs of $100,000 Their firm's total revenue was $120,000 They record $20,000 in "profit," and pay income tax on that amount But was the $20 000 all ownership income? Part of it probably was but part of it was for the partners own labor services Distinctions between ownership and labor income are extremely difficult to make in the case of partnerships and proprietorships In NI figures, the two are lumped together as proprietors' income" Other misleading interpretations can be made of NI data For instance also reported is personal rental income If a man owns land buildings and the like, and rents them to others (or to himself!), *his pay is reported as personal rental income" But if he owns a firm that* rents to others his pay is reported as 'proprietors' income", and if he *owns a share of net worth in a corporation that rents to others, his pay* is reported as corporate profits"

With these warnings in mind a review of what would be counted to arrive at a measure of NI can be given

1 *Compensation of employees* While total pay for labor services cannot be counted, as explained above, it is possible to add up the total pay of those who are strictly employees and not proprietors or partners Included is the pay given to business and government employees and also other compensation of employees such as the employers' share of social security and pension contributions

2 *Proprietors' income* This figure reports the total income of partners and proprietors without distinguishing between pay for labor services and pay for ownership services Part of this income is not taken in money, but in the form of an increase in the value of net worth reflecting an increase in the value of assets (or reduction in the liabilities) of the business firm

3 *Rental income of persons* This figure includes not only rent payments *actually going to individuals, but the rent that homeowners are pre*sumed to pay to themselves

4 *Corporate profits* Total corporate *profits and not just dividends* paid are reported here though a detailed breakdown will indicate what part is retained by the corporation The figure for corporate profits includes a small item for inventory valuation adjustment' reflecting changes in the value of inventories held by corporations

5 *Net interest* Interest payments, not including interest on promises issued by the federal government

A summary presentation of national income for 1963 appears in Table 6 3

An Apparent Discrepancy

The analysis thus far has shown that the total claims allocated must have a value equal to the value of the product created The example of the simple economy with three firms showed in some detail how this equality

TABLE 6.3

NATIONAL INCOME, 1963

(billions of dollars)

I Compensation of employees			340.3
Wages and salaries		$312.1	
Private	$252.9		
Military	10.9		
Civilian government	48.3		
Supplements		28.2	
Employer contribution for social insurance	15.0		
Other	13.1		
II *Proprietors' income*			50.6
Business and professional		37.6	
Farm		13.0	
III Rental income of persons			12.3
IV *Corporate profits and inventory valuation adjustment*			50.8
Profits before tax		51.2	
Dividends	18.0		
Retained earnings	8.7		
Corporate tax	24.5		
Inventory valuation adjustment		−0.4	
V Net interest			24.4
Total national income			478.5

NOTE Because of rounding detail may not add to totals
SOURCE U S Department of Commerce

works out on an aggregate level. The value of services and the value of product must be identical in any period of time.

Nevertheless, Table 6.2 shows the value of total product created in 1963 (*net national product*) as $533.1 *billion, and Table 6.3 shows* total claims allocated in 1963 (national income) as only $478.5 billion.

Of course, counting practices are not perfect, and we would expect a slight difference between reported NNP and reported NI, but the 1963 difference between the two was $54.6 billion. Nonetheless, the difference is *easily explained. In measuring product taken*, the Department of Commerce uses the prices *actually paid* for final products, even though these prices often include sales taxes, excise taxes, franchise fees, and other "indirect business taxes" paid to the government. These indirect business taxes are not, of course, reflected in the claims allocated by production groups *for services performed*.

For example, if in the simple three firm economy represented in Table 6 1 there were imposed a 10 percent tax on sales by distributors, the value of the product taken by the people would have been recorded as $2090, and total product taken would have been shown as $2640

It is to be stressed that these indirect business taxes reflect a *counting* problem, not a violation of the rule that claims allocated are equal to *total product Total product taken and claims allocated are equal* But the reported figure for total product taken, NNP, is 'blown up" by the unavoidable inclusion of indirect business taxes[2]

Some Other Adjustments Made

Most commonly, total income data are presented in annual terms But for many purposes it is important to watch changes in total income *over shorter periods of time Therefore, the Department of Commerce* renders quarterly reports on gross national product and on national income

The quarterly reports are usually presented as "seasonally adjusted annual rates" for the first, second, third, or fourth quarter of a given year By "seasonally adjusted annual rates" is meant that the figure presented implies a certain GNP or NI *for the entire year*

For instance, if normal business activity were the same during all seasons of the year, and if quarterly GNP were $125 billion, the annual rate would be four times this amount or $500 billion But one fourth of the year s production does not ordinarily take place in each quarter If production were $125 billion in the fourth quarter, the seasonally adjusted annual rate would be less than $500 billion, because ordinarily more than 25 percent of the year's production takes place in that quarter

Suppose you want to make a comparison between the total income of the economy in 1950 and 1960 You could look up 1950 GNP and find that it was $284 6 billion, and look up 1960 GNP and find that it was $504 4 billion The indicated increase is $219 8 billion But such a comparison would be misleading

For one thing, *the composition of the output would be different* There would be products taken in 1960 that did not exist in 1950 and many others that were taken in relatively greater quantities The use of "dollars' worth" to indicate the amount of product is reasonable, over fairly short periods of time, but the longer the period between the years compared *the less valid the comparison, simply because the products are not the same*

There is nothing that can be done to avoid the kind of distortion created by a changing composition of total output. But there is another kind of distortion inherent in the above 1950–1960 comparison that can to a large extent be rectified.

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[2] When indirect business taxes and some minor similar adjustments are allowed for, there is still a discrepancy in the 1963 figures of approximately $2 7 billion. But this difference is small enough that we may justifiably attribute it to statistical discrepancy"

Correcting for Price Level Changes

Not only did total output increase between 1950 and 1960 but so did the prices of most products. Any general price level change, whether up or down, distorts total income measures taken by prices current in the years being measured.

Changes in the general level of prices are discussed in Chapter 18. Here it can only be noted that the Department of Commerce each year recalculates at present prices all past years' total income figures. For instance, 1960 GNP in 1962 prices was $515.8 billion, and 1950 GNP in 1962 prices was $370.0 billion. In 1962 prices, then, the increase was $145.8. If you used 1950 prices, of course, the figures would be different.

When comparisons between years are made using the prices of only one particular year, such as "in 1962 prices" above, the measures are said to be in "constant dollars." When the 1950 prices are used for 1950 GNP and the 1960 prices for 1960 GNP, the measures are said to be in "current dollars."

Table 6.4 shows U.S. gross national product from 1929 (the first year such measures were made) through 1962, in both current and constant (1962) dollars.

Once again, however, the warning applies. Even though the figures shown in Table 6.4 have been adjusted for price level changes, the 1929 figure is not strictly comparable with the 1962 figure, nor are any GNP comparisons over a period of four or five years completely dependable.

Some Uses of the Measures

Total income figures are widely quoted for a number of purposes. In thinking of the uses to which GNP, NNP, and NI figures are put, you may make direct comparisons with the uses to which individual income figures are put.

Like an individual, an entire economy is ordinarily limited in the amount of product it can take. An individual's income is a fairly accurate guide to his ability to take product (although he may draw on savings, borrow, and the like). And the most recent total income of the economy, especially if there is no recession, is a good indication of its ability to produce—of its capacity in a sense.

You may use income to compare the well being of two different individuals. There are weaknesses in income as a measure of individual well

TABLE 6 4

U S GROSS NATIONAL PRODUCT, 1929–1962

(in billions of current and constant 1962 dollars)

Year	*Current dollars*	*1962 dollars*	*Year*	*Current dollars*	*1962 dollars*
1929	104 4	212 0	1946	210 7	328 4
1930	91 1	192 5	1947	234 3	327 9
1931	76 3	178 2	1948	259 4	340 7
1932	58 5	151 9	1949	258 1	341 7
1933	56 0	148 2	1950	284 6	370 0
1934	65 0	162 3	1951	329 0	400 4
1935	72 5	177 8	1952	347 0	415 8
1936	82 7	202 7	1953	365 4	434 8
1937	90 8	213 2	1954	363 1	426 3
1938	85 2	203 9	1955	397 5	459 6
1939	91 1	220 7	1956	419 2	469 4
1940	100 6	239 3	1957	442 8	478 5
1941	125 8	278 6	1958	444 5	471 1
1942	159 1	318 5	1959	482 7	502 6
1943	192 5	358 7	1960	503 4	515 8
1944	211 4	384 8	1961	518 7	525 5
1945	213 6	377 5	1962	553 9	553 9

SOURCE Council of Economic Advisers *Economic Report of the President* 1963

being both because not all benefits are created by product and not everyone shares the same evaluation of product that is exchanged Similarly comparisons are made between nations or states (with adjustments for size of population) to determine how well off the peoples of different areas are Published data show that annual per capita income in the United States is over $2000 while annual per capita income in some underdeveloped countries such as Haiti or India is less than $100 And just as when such comparisons are made on an individual level interstate or international comparisons of total income must be made with some reservations

If you want to compare the well being of peoples in different countries income would be one but only one of the measures you would want to look at Another might be average life expectancy at birth, another might be average daily caloric intake In the United States it is common to make regional comparisons in the number of bathtubs per person or the percentage of families that own their own homes Comparisons of well being are always based on implicit value judgments of one type or another

Just as you might look at an individual's record of income over a period of years to determine the progress he is making you might make interyear comparisons of an economy's total income to determine its rate of growth Interyear comparisons also show what happens when recessions or depressions hit an economy Table 6 4 shows that GNP in 1962 dollars fell from $212 0 billion in 1929 to $148 2 billion in the depths of the Great Depression in 1933 and that it declined from a 1945 level of $377 5 billion at the end of World War II to $328 4 billion in 1946

But once again interyear comparisons over long periods of time must be interpreted with care and when made by others to prove some point followed with suspicion

The immense wealth of detailed information on the composition of output is extremely valuable in its own right especially when you are less concerned about the amount of economic activity than the kind of economic activity being carried on A review of changes taking place in this detail constitutes nothing less than a review of the way our economy is changing from year to year

Two Other Measures Personal Income, and Disposable Personal Income

Gross national product, net national product and national income are the only measures made of the total income of the U S economy But the Department of Commerce also presents a number of other measures, two of which—personal income and disposable personal income—are widely quoted

Personal income and disposable personal income are, it must be emphasized, not measures of total income They come closest to being measures applicable only to the first sector—the people

The general purpose of the two measures is to show how much "spending money" the people earned or otherwise received during a period of time, usually a year This is different from national income, because not all of the income reported under national income can be spent by the people

To arrive at personal income, or PI, begin with national income, but exclude the following, which are not paid in money to the people corporate profits taxes, corporate retained earnings, and both employers' and employees' shares of social insurance contributions But then add in some payments received by the people that are not counted as payments for services but are transfer payments *from* other sectors *to* the people net interest paid by the federal government, other government transfer payments, and business transfer payments

Not all of personal income can actually be spent, because the people

TABLE 6.5

PERSONAL INCOME AND DISPOSABLE PERSONAL INCOME, 1963

(billions of dollars)

National income (from Table 6.3)		$478.5
Less corporate profits minus dividends		−32.8
Corporate tax liability	$24.5	
Retained earnings	8.7	
Inventory valuation adjustment	−0.4	
Less contributions for social insurance		−26.9
Plus net interest paid by government		+ 8.5
Plus other government transfar payments		+34.3
Plus business transfer payments		+ 2.4
Total. Personal income		$464.0
Less direct personal taxes		−61.6
Total Disposable personal income		$402.4

Note Because of rounding, detail may not add to totals.
SOURCE U S Department of Commerce.

must pay direct taxes especially income taxes to government units. Disposable personal income, or DPI is computed by subtracting direct taxes from PI

The computation of PI and DPI should not mislead you however The deduction of retained earnings does not mean that owners of these corporations are not paid for their ownership service. They are paid, but they are not paid money

PI and DPI do not measure total income, and they may in fact move in different directions from total income. There are years, for instance, in which NNP and NI do not increase, or even decline, reflecting a recession during these recession years, PI and especially DPI may continue to increase, because recession years are years in which government transfer payments tend to increase, and direct personal taxes tend to decline.

This fact alone makes DI and DPI important in their own right. And indeed each of the five measures presented in this chapter has its unique qualities that make it useful for a variety of analytical purposes.

7

THE OPERATIONS OF FINANCE

It has been noted already that in the aggregate the people can take as much product as they create so that total services provided are 'worth' exactly as much as total product created It has also been noted that on an individual level each person can take as many 'dollars worth" of product (including product taken collectively) as he creates when he provides services

Recall also these other important feastures of an interdependent economy

1 Products are most commonly produced not by individuals acting on their own but by production groups mainly private business firms, and production groups not being individuals, cannot themselves provide services and create product. Hence production groups can take and hold product only through legal arrangements such as the issuance of liabilities

2 Individuals who provide services do not ordinarily take the very same products they created or helped to create, but can take product equal in value produced by others

There is nothing new or remarkable about either of these two points They are everyday facts of life for anyone living in an advanced, interdependent economy They are raised here because they have one important feature in common they are made possible only by the existence of the man-made system of arrangements called finance.

I "FINANCE"

In its most general sense, finance refers to the arrangements through which organizations or persons other than the individuals who produced a product can take and hold that product.

This means two things

cepted by people by businesses and by government in exchange for product. Such a financial instrument is called money Any instrument that is generally acceptable in exchange for product (and for services) may be called money

2 But ordinarily as has been noted many times already the people do not want to take all the product they create but want to save and production groups do not want to surrender all the product they hold but want to invest There is a need then for claims that take the form of financial instruments that are not generally regarded or used as immediate claims to product and are not usually accepted in exchange for products or services

When the word 'finance is used people most often think only of the second aspect described above They think of finance in terms of borrowing and lending the 'stock market," the 'mortgage market," and so on But a nation s financial system is the *entire* scheme of man made institutions that allows individuals to take and hold product other than *that created by them and that allows organizations to take and hold product* at all

Most of this chapter will be concerned with the second aspect of finance—the arrangements by which individuals are allowed to operate with surpluses and deficits Since such a discussion cannot be carried on without money entering in it is useful to discuss that man made institution briefly A more extended and detailed discussion of the money system appears in Chapters 9 10 and 11

The need for money arises as noted because those who provide services and contribute thereby to the production of some product ordinarily will want to take other products in exchange Consequently, the type of claim desired by people in exchange for their contribution of services will ordinarily be one which can be used to acquire any product from any production group Money is such a claim Note that this implies a definition of the term money" a claim *generally acceptable in exchange for product* While government issue or endorsement might help make a claim 'generally acceptable" there is no necessary connection between government and money Pieces of paper issued by a government might cease to be generally acceptable in exchange for product, and therefore might actually cease to be money, while, on the other hand something may be generally acceptable in exchange for product, as cattle and gold once were and as checking accounts are today, with no government endorsement at all.

In highly simplified terms, the complex money system operates in the following manner In order to induce people to contribute services to the production of a product, firms must ordinarily pay them money Money is obtained from banks and paid to those who perform the services. When the products are sold by firms the money is returned to them and they in turn surrender it to the banks

Such a process is a continuous one At any time that one firm is obtaining money from a bank another will be surrendering money to a bank and at all times the people will have some money and firms will have some product Money then is not only a device that allows people to take product other than that to whose production they have contributed it is also a form in which they may *hold* claims when they have performed services but have not yet taken product of equal value The first aspect of finance as described above is then really part of the second money is something you can hold if you wish to take less product than you have created

The special characteristic of money as a claim is that it is generally acceptable in exchange for product or for other valuable things There are other types of claims that may be held when you wish to take less product than you have created and each type of claim has its own special characteristics

Restricted Claims

In a simplified view of the economy the process that has been described goes like this (1) Firms produce product and simultaneously allocate claims equal in value to the product produced so that (2) firms then have the product and those who have provided services have claims of equal value A financial transaction has already taken place the issuance of claims allows organizations to hold product produced through the ownership and labor services of individuals Then (3) the individuals surrender the claims to the firms in exchange for product so that (4) the firms have no product and the individuals have no claims This simple view of the economy could be made a little more realistic without being made much more complex if it is allowed that each firm starts and finishes its production of the product at a different time and that most firms produce products continuously The people then always have some claims and firms always have some product that the people have not yet taken but the value of the product held by firms remains equal to the value of the claims held by the people

In such a simple economy, the only type of claims needed would be money Finance is used only to allow individuals to take product other than that which they themselves created and to allow firms to hold the product temporarily until the people come to take it In order to understand the financial process we have to leave this oversimplified model and take account of two important factors

1 Firms frequently do not want to give up to the people all the product they hold Some product held by firms—machines buildings and

other productive facilities—was never intended for consumers and could not be used by them Firms also ordinarily do not want their inventories depleted to nothing but want to keep a minimum stock of finished product. It is thus important to firms that the people hold some kind of claim that is not generally acceptable as a claim to product, they want to issue some kind of claim they know the people will hold more or less permanently

2 Individuals frequently do not want to give up all their claims for product. They wish to accumulate and hold claims as 'savings" While there is no reason why they cannot hold money as savings (much savings is in fact held in the form of money), the people do not really need for such purposes a claim whose special characteristic is general acceptability in exchange for product The special characteristics they want in a more or less permanent claim will depend on why they want to save it may be life insurance protection protection against inflation ability to earn income as interest, dividends or capital gain or a combination of these or other characteristics

The following discussion is intended to indicate the transactions by which the general claims issued simultaneously with the creation of the product are converted into more or less permanent or 'restricted claims that give the holders special benefits other than the right to demand product in exchange.

II CREATION OF RESTRICTED FINANCIAL INSTRUMENTS

Suppose a firm wishes to hold some kind of product—a plant or other place to work machinery, inventory, and the like—and decides to produce it itself rather than to obtain it from another production group The simplest and most direct way the firm could proceed would be to bring together people who will provide ownership and labor services to create the product, and give them in exchange for their services claims that cannot be used to take the product created that is, restricted, nonmoney financial instruments. One type of financial instrument appropriate under these circumstances might be net worth type claims or capital stock, which permit the holders to share in any increase in value of the assets the firm holds (that is, to share in profits), receive dividends if they are declared and perhaps to participate in the naming of the firm s officers Capital stock would not give holders the right to take any part of the firm s assets (except in the rare case of the liquidation of the firm) Capital stock, then allows the firm to hold product virtually indefinitely

So the simplest and most direct way in which a firm under these circumstances might arrange to take and hold product would be to give people capital stock in exchange for their services Unrealistic? Perhaps so, but let us see.

Most frequently, of course those who provide ownership and labor services will insist on receiving money instead of restricted financial instruments such as capital stock Some providers of ownership services will be happy enough receiving increases in the value of capital stock already held (capital gains) instead of money in exchange for their ownership services, but owners usually expect some money too and workers almost always want to be paid in money, not in restricted claims

We have noted that finance allows people and organizations to take and hold product other than what they themselves created We may now note another important attribute of the financial process When people contribute services and create product they are allocated new claims issued by their firm, the financial process allows the firm to create and issue new claims of one type (capital stock for instance) while the people who contribute their services receive claims of another type (ordinarily money) This is a very important attribute of the financial system the economy as we know it would not work without it It means our hypothetical firm can still issue capital stock as its method of arranging to hold product, but that owners and workers can receive money if they desire Note, however that despite this process, the new claims are created when the product is created not at some other time

In simplified fashion again this is how the process operates First, we must assume that to begin with the people hold money (how much is not important, we are interested in just $600 of that money, because we will assume that the firm wants to hold $600 worth of product) To begin with, the firm holds nothing We have, then

FIRM		*THE PEOPLE*		
Holds	*Issues*	*Hold*		
		Money	$600	(1)

The firm then issues new capital stock in exchange for money The firm now holds money, and the people hold capital stock Have more claims been created? Absolutely not Note that the people hold exactly the same amount of claims as before Something else has taken place, however, and something quite important The people now hold restricted claims, which cannot be used to demand product [2]

We now have

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[2] It is useful to recall that claims are *claims to product* which come into the possession of people by virtue of their creation of product If business firms want to *keep* product to that extent claims are *left with* the people Without additional production no new claims are created although the claims in existence can change form, and although there can be created financial relationships of greater or lesser complexity *among* business firms

FIRM				*THE PEOPLE*		
Holds		*Issues*		*Hold*		
Money	$600	Capital Stock	$600	Capital Stock	$600	(2)

Now the firm is prepared to give money to the people who contribute their services to create product for the firm to hold We now have

FIRM				*THE PEOPLE*		
Holds		*Issues*		*Hold*		
Product	$600	Capital Stock	$600	Money	$600	
				Capital Stock	$600	(3)

It is important to note that now new claims have been created, the people hold more claims than they did at the start. New claims are created only when new product is created

This last point is important The act of printing up capital stock certificates is not the same as the issuance of new claims, it is just a printing operation The act of exchanging these newly printed certificates for money is not the same as the issuance of new claims, it is merely a change in the form in which existing claims are held Only when the product is created and the money is paid out do the claims held by the people increase This point will be important in later chapters in connection with the savings investment process

If we ignore the money that the people were presumed to have to begin with, we now have

FIRM				*THE PEOPLE*		
Holds		*Issues*		*Hold*		
Product	$600	Capital Stock	$600	Capital Stock	$600	(4)

From T account (4), it looks very much as though the people have contributed their services to create product for the firm in exchange for capital stock—precisely what we said seemed unrealistic in an earlier paragraph True enough, the exact individuals who hold the capital stock are not the same individuals who provided the services thanks to the financial process But when the people as an aggregate are considered, firms *do* get product in exchange for capital stock and the people *do* get capital stock in exchange for the provision of services

Both aspects of the operation—the individual and the aggregate—are important for an understanding of the financial processes of the economy It is important to remember that when firms and other organizations wish to hold assets they issue restricted claims such as capital stock in exchange for the services of the people and *new* claims are issued only when the product is created not before It is just as important to understand the financial process that allows a firm to issue new claims in one form when the product is created but allows those who create the product to receive new claims in another form

In the following section some additional examples of these processes involving government and the rest of the world will illustrate some additional attributes of these financial processes

The Government and Claim Creation

When business firms create product, claims are created and allocated to the people (who have provided services), and when the people take the product claims are surrendered to the firms and are hence destroyed Because the people do not take all the product created not all claims are returned to firms, and hence some claims are not destroyed The amount of claims held by the people depends, then, at least in part, on the amount of product business firms keep

Collective consumption through government offers a somewhat parallel situation Product is created by business firms and is taken collectively by the people When the product is created, claims are created as usual and are allocated as usual to those who provided services Government officials may then ask themselves How many of these claims created and held by the people should be left with the people? In earlier chapters it was noted that the government might operate with a ' balanced budget," requiring the people to surrender (as taxes) as many claims as were created when the collectively taken product was created The government, it was noted, might also operate with a "deficit budget" taking away and destroying only part of the claims created when the product was created In such a case, the people would be left with some claims, and, ordinarily, the government would want such claims to be restricted ' and hence might issue bonds Finally, the government might operate at a "surplus" destroying some claims previously created, in such a case, the people would be left with fewer claims than before the budget period began

Suppose that the people decide through their government representatives that they will take $100,000 worth of product collectively, and that all the claims created are to be left with the people (that is, that the government will collect no taxes) The simplest and most direct way for this to take place would be for the following transactions to occur·

1 Business firms create the product, using the services of individuals, and turning the product over to the government.

2 Those who provided services then have claims against the firms.

3 At the same time, the government issues restricted claims against itself in the form of bonds giving them to the business firms in exchange for the product.

4 The business firms then settle the claims against them by giving the government bonds given to them to the providers of service

If such transactions actually took place, the people would wind up holding claims against the government, business firms would own no claims on anyone and would have no claims against themselves. We would have

THE GOVERNMENT

	Issues
	Bonds $100 000

THE PEOPLE

Hold	
Government Bonds $100 000	

(5)

The unrealistic element in the above description is the absence of money Business firms will not accept bonds from the government in exchange for product because those who provide services will not accept bonds from business firms in exchange for their services.

It may be noted in this example as in the last that the introduction of money accomplishes one important thing it allows claims to be newly issued in restricted form (this time government bonds instead of capital stock) but allows those who perform the services through which the product is created to take claims in the form of money, an unrestricted claim.

To follow how this takes place, once again assume that the people have money at the start. (In Chapter 9 it will be shown that even this is not necessary and that the creation of new money is sometimes a by product of the financial transactions described) Since the people will take $100 000 worth of product collectively, we show only that much of the money they hold

THE PEOPLE

Hold	
Money $100 000	

(6)

The government then sells $100 000 worth of new bonds to the public. The government now has the money, and the people have the bonds. We have

THE GOVERNMENT

Holds		*Issues*	
Money	$100 000	Bonds	$100 000

THE PEOPLE

Hold			
Bonds	$100 000		(7)

Notice that the people s claims have become restricted claims but that the total amount of claims held by the people has not changed No new claims have been created

Now the people contribute services to production groups and create the product that will be taken collectively As usual when product is created the people are allocated claims against business firms so we have

THE GOVERNMENT

Holds		*Issues*	
Money	*$100 000*	*Bonds*	*$100 000*

THE PEOPLE

Hold			
Bonds	*$10 000*		
Claims	$100 000		(8)

BUSINESS FIRMS

Hold		*Issue*	
Product	$100 000	Claims	$100 000

Note that the people now have both the government bonds that were purchased from the government and the claims allocated by business firms Total claims held by the people have now increased allowing business firms to hold product The government is not affected in this step

The government then buys the product using the money that had been obtained from the people The product is assumed to be consumed and hence disappears from the record We have

THE GOVERNMENT

		Issues	
		Bonds	$100 000

THE PEOPLE

Hold			
Bonds	$100 000		
Claims	$100 000 (unchanged)		(9)

BUSINESS FIRMS

Hold		*Issue*	
Money	$100 000	Claims	$100 000

In this step, the people are not affected Businesses now hold enough money to settle the claims the people have against them When business firms pay this money to the people, they no longer hold anything nor are there any claims against them We are left with the government, with restricted claims (in the form of government bonds) against them, and with the people, who hold the government bonds and also hold the $100,000 in money which they began with We have

THE GOVERNMENT		*THE PEOPLE*		
	Issues	*Hold*		
	Bonds $100 000	Bonds $100 000		
		Money $100 000		(10)

THE GOVERNMENT		*THE PEOPLE*		
	Issues	*Hold*		
	Bonds $100 000	Bonds $100 000		(11)

What we are left with in (11) is essentially the same as what we had in (5) in which the transactions were carried on without money Product is created and taken collectively, and the government has decided that the new claims created when the product was created should be left with the people rather than destroyed and that these new claims held by the people should be in restricted form The introduction of money changes things in only one respect The exact individuals who hold the bonds are not the same as the exact individuals who created the product As noted before the financial transactions described here allow newly created claims to be issued in restricted form even though those who create the product are paid in money

The Rest of the World and Restricted Claims

Claims held by the people as a whole increase whenever business firms take product to hold, whenever governments do not destroy all the claims created when product is taken collectively (that is, when there is a deficit), and in a third way—whenever the rest of the world takes net product from the United States

When foreigners take net product from the United States and wish to restrict the claims issued, the simplest and most direct way for them to do so would be to issue bonds (which we will call foreign bonds to distinguish them from government bonds and corporate bonds), give those bonds to American business firms in exchange for product, and then let the American business firms pay those who provided services by giving them the foreign bonds We would have

REST OF THE WORLD		AMERICAN PEOPLE		
	Issues	*Hold*		
	Foreign Bonds $100 000	Foreign Bonds $100 000		(12)

Again the transaction has been described as if there were no money Of course those who provide services want money rather than foreign bonds As a matter of fact we must specify that they want American dollars not just money And once again financial transactions can be described that will allow new claims to come into the hands of the American people in restricted form as foreign bonds while those who provide services receive money To test your understanding of financial transactions try your had at setting up T accounts that describe step by step the transactions involved Assume that the people have money to begin with You should wind up with the same T accounts as in (12)

These T accounts should be interpreted as meaning that foreigners pay for American product with newly issued restricted claims although those who create the product need not hold restricted claims but may receive money

Two Types of Financial Transactions

Because those who provide productive services ordinarily want money rather than restricted financial instruments almost every financial transaction involving business government or the rest of the world has two distinct steps First the issuer of new financial instruments exchanges them for money and second it returns the money to the people in exchange for their services

These two steps may be described as different types of financial transactions

In the *first type* there is no change in the amount of financial instruments held by the people There is a change in the form of financial instruments held by the people and this change may be significant for the economy But because no new product is held by business firms because no new deficit financed collective consumption has taken place and because no net product has been taken by the rest of the world no new claims are created We shall turn to a more extensive discussion of this first type of financial transaction in the next chapter when financial intermediaries are discussed

Earlier, in describing how the government finances a deficit budget, we wound up with the government issuing $100 000 in bonds, and the people holding both these bonds and the $100,000 in money with which they began

Now suppose that the government imposes $100 000 in taxes without taking any product collectively The $100,000 in money is taken from the people, and then returned to them in exchange for their $100,000 in bonds The people are left with $100,000 in money and no bonds, the government has no claims outstanding against it

Once again, money adds something to the operation Without money, those who gave up claims would be the same ones who held the bonds When money is used, one group of people (the taxpayers) give up claims while another group (the bondholders) simply exchange their bonds for money Of course, the membership of the two groups will probably overlap

In the destruction of financial instruments, there are also two types of financial transactions the first type, in which people change the form in which they hold financial instruments (as when, for instance, the government gives money to bondholders in exchange for their government bonds), and the second type, in which the people as a whole give up claims (as when, for instance, government imposes money taxes on the people)

To test your understanding of financial operations, you should describe for yourself each step in the transactions by which claims are destroyed when the people take product from business firms or when the United States takes net product from the rest of the world Be sure you can distinguish the first type of financial transaction from the second type

III A POSTSCRIPT · INTERFIRM FINANCIAL RELATIONS

This book is concerned primarily with intersectoral economic relationships involving transactions among the four major sectors the people, private business, government, and the rest of the world Hence most relationships *within* any sector have been ignored

The same has been true of this chapter Finance has been discussed in terms of the money system and in terms of relations between the people on the one hand and business, government, and the rest of the world on the other

Yet some recognition should be made of the fact that firms have financial relations with each other, and with government and the rest of the world as well What this means is that virtually all firms have financial instruments, as well as product, among their assets

In summary form, a typical firm may have a balance sheet of this sort:

FIRM X

Assets		*Liabilities*	
Productive facilities and inventory	$50 000	Promises	$30 000
		Net Worth	$30 000
Financial instruments	$10 000		

(13)

There are a number of reasons why a firm may want to hold financial assets

1 Almost all firms want to hold some *money*, in order to be constantly prepared to take advantage of possible business opportunities to satisfy potential demands on them, or just to "make change" Many smaller firms especially retail stores, hold more money than they probably want to, as they accumulate revenues from sales but wait to pay bills More money is in fact, held by private business than by any other sector

2 The same general purposes may be accomplished, and some income earned at the same time, if the firm holds financial instruments that may be easily and quickly sold without loss Such *liquid* assets might include special savings account type instruments created by banks, short term government promises commercial paper" (short term promises issued by strong well known firms), and similar instruments

3 While a physical asset owned by a firm is gradually wearing out, the firm may use the depreciation (see Chapter 5) to acquire financial instruments instead of capital goods For instance, if a firm owns one large machine that has an expected life of ten years, it cannot buy one tenth of a replacement machine each year It must wait until the machine is worn out before replacing it. The depreciation will be used to acquire financial assets together known as a "sinking fund" When the ten years are up and the machine is worn out, the instruments may be sold and a new machine purchased

4 Some firms own shares of net worth of other firms, primarily in order to control the policies of the firms owned

Look at balance sheet (13) again Notice that firms must make arrangements (in the form of liabilities and net worth) to hold *any* asset, whether physical or financial If Firm X acquires more money, with no change in any other asset, *its liabilities and/or net worth must increase.*[3]

Despite the fact that a firm that acquires a financial instrument must issue a new financial instrument, *the principles stated earlier* still stand The financial instruments held by the people, that is total claims, increase only *when business firms add to their holdings of product,* or when government units have deficit budgets or when net product is taken by the rest of the world

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[3] If a firm borrows the money the new asset will be money, and there will be a new promise under liabilities. If it does not borrow the money (or issue new shares of net worth) the additional money under assets must mean the firm has made a profit on some transaction, and there will be an increase in the value of net worth.

The acquisition of financial instruments by business firms cannot be the cause of an increase in the savings of the people Such transactions do complicate the financial relationships involved however

Take a couple of examples

First assume that a business firm takes product and issues promises which are held by another business firm We might have

BUSINESS FIRM A

Holds	*Issues*
Product $10 000	Promise owned by Firm B $10 000

BUSINESS FIRM B

Holds	*Issues*
Promise of Firm A $10 000	Net Worth held by the People $10 000

THE PEOPLE

Hold	
Net Worth of Firm B $10 000	

(14)

The people's holdings of financial instruments increase just as before when businesses hold more product Much more complex cases can be imagined, and do exist but the rule still holds that when businesses take more product the financial holdings of the people increase

Business firms can acquire financial instruments as assets however, even when there is no business investment Suppose a business borrows some money from the people and uses it to acquire a government bond We should have

FIRM A

Holds	*Issues*
Government promise $1000	Firm s promise held by the people $1000

(15)

This would be the case for instance if the government unit had had a deficit and had sold a new bond to the business firm In such a case the people s financial savings would increase on account of the government deficit even though the new financial instrument acquired by the people would be one issued by a business firm instead of by the government Whenever a government unit has a deficit the people s savings increase regardless of whether it is a business firm or the people who buy the new government promise

These are only two fairly simple examples of acquisition of financial instruments by firms You can undoubtedly think of others But the most common cases cannot be understood without some examination of the operations of commercial banks and other financial intermediaries

This examination begins in the next chapter

8

THE INSTITUTIONS OF FINANCE

The financial transactions described in the last chapter can allow organizations to issue restricted financial instruments to one set of individuals so that money may be paid to another set—those individuals who provide productive services to the organization

This chapter has two objectives First, it will explore the institutional mechanisms by which organizations place restricted financial instruments with holders Such an exploration will involve a discussion of the functions of investment banks, bond dealers, stock exchanges, and other members of a class of organizations that will be called financial institutions

Secondly, it will treat a type of financial transaction not discussed in the previous chapter—one that allows those who acquire newly issued financial instruments to hold them in a form different from that in which they are orginally issued by business, government, and the rest of the world Such a discussion will involve commercial banks, mutual banks, savings and loan associations life insurance companies, and other members of a class of organizations called financial intermediaries

I FINANCIAL INSTITUTIONS

Whenever a financial relationship is established, there is an issuer and a holder of some kind of financial instrument The relationship may or may not be *negotiated* For example, if you want $10,000 worth of money to buy a house, you may go to a savings and loan association After some discussion, you will sign a promissory note and the association will transfer money to you You "issue" a promise and the association holds your promise. You will then transfer the money to the seller of the house.

the money to the borrower—in this case, the public utility. Such a firm is an *investment bank*.

The main function of an investment bank is to assist business firms to find holders for the financial instruments they want to issue. Suppose you are the treasurer of our public utility firm, and you want to get for your firm $100 million in money by issuing bonds. Your first step will be to publish a "prospectus" of the bond issue—a collection of pertinent information about your firm and about the proposed bond issue, necessary partly because of government regulations and partly because prospective bond buyers will insist on having such information. An investment banker who has worked in assembling such information many times in the past can help you. *He can also help you decide on the interest rate you will have to pay to make the bonds acceptable in the market—salable in competition* with bonds of other firms and other financial instruments.

When the details of your bond issue have been worked out, you will take bids on the entire $100 million issue. Investment banking firms, or "syndicates" of them (groups of firms organized together for the single purpose of bidding on security issues), will bid on the bond issue. Since the investment banks or syndicates ordinarily wish to sell the bonds after buying them, before bidding they will analyze the market and perhaps even get tentative agreements from prospective bond buyers.

As treasurer, you sell the whole $100 million bond issue to the highest bidder, and as far as you are concerned the bonds are sold. The buyer, an investment bank or syndicate, immediately goes about selling the bonds, presumably at a higher price than your utility was paid. The difference in price is the investment bank's income for its services.

However, if the bonds cannot be resold at a favorable price, the investment banks, rather than your public utility, must suffer the loss. If the bonds can be resold at an even higher price than was expected because of an unforeseen improvement in the bond market, the investment bank, rather than your public utility, gets the extra proceeds.

The name applied to the practice described here is "underwriting." The investment bank underwrites a bond issue when its bid is accepted. The amount of money the issuing firm will get is fixed, the risks involved in final placement of the bonds being borne by the investment banks.

Bond issues of state and local government units are also underwritten by investment banks, but the securities of the national government are handled by Federal Reserve banks. (Federal Reserve banks are discussed in later chapters.)

Shares of net worth, in the form of stock certificates, are also sometimes issued through, and underwritten by, investment banks. As a matter of common practice, however, when a corporation issues additional shares of stock it gives the present holders of shares the right to subscribe to the additional shares before they are offered to the general public. Moreover, if the present shareholder does not care to exercise his right, he may sell it to someone who does

The preceding applies to additional shares issued by an already existing corporation. A newly formed corporation may also issue shares through an investment bank, but ordinarily the issue will not be underwritten. The investment bank will agree to make every effort to find buyers at an agreed upon price but if the shares cannot be sold at the original price the price may be reduced or the shares may be returned to the issuer The investment bank assumes no risk, and operates on a commission basis

Brokers and Dealers

Consider another situation. Suppose that you hold 100 shares of the net worth of the General Motors Corporation. You decide that you would prefer to hold shares of the General Electric Corporation. You might know someone who holds shares of the General Electric Corporation and who is willing to make the trade, so that the transfer can be worked out by negotiation. But this is cumbersome and uncertain

There is then apparently a need for the services of a firm that specializes in pairing off those who want to trade the financial instruments they own. A firm that specializes in this way is a *brokerage firm* The people who handle the trading of shares in a brokerage firm are called stock brokers If you want to sell shares for money or for the shares of another corporation you do not do it yourself, you have a broker do it for you

As a third example suppose that you are the investment officer of a bank that holds some government bonds. Your bank wants to sell a million dollars worth of bonds to get money to lend to the bank's customers You might be able to find another bank, a life insurance company, or some other financial intermediary that would like to buy the bonds But it would be much simpler if there were a firm that specialized in buying and selling government bonds You could then sell the bonds promptly, and the firm could find another buyer Firms that specialize in buying bonds are 'bond dealers

It is important to all holders of financial instruments that they have an opportunity to exchange what they hold for money or for other financial instruments. You are much less reluctant to hold a financial instrument if you know you can always trade it for another or sell it. The opportunity to do so promptly and to the best advantage requires the existence of firms that specialize in this activity You do not have to find a buyer or a seller, someone else will do it for you—for a fee, of course

The firms that specialize in assisting would be issuers of new financial instruments make up a financial market." A place where many investment bankers brokers and dealers have their offices is a financial center Wall Street is referred to as *the* financial center of the United States There are smaller centers in all large cities.

The shares of many large corporations are traded every day It is convenient to have a central place in which orders to buy and sell are handled Brokers can then match orders to buy with orders to sell rather easily A central place at which brokers gather to execute orders to buy or sell is a stock exchange ' The New York Stock Exchange is most widely known

The only shares that may be traded on the floor of an exchange are those that are listed To have its shares listed a firm must meet certain tests of size dividend payments number of owners of shares and the like Some of the giants and many of the somewhat smaller firms are listed on the American Stock Exchange also located in New York City There are stock exchanges in several other large cities

When a transaction takes place on a stock exchange the name of the stock the number of shares and the price are reported This information is flashed by ticker tape throughout the country Financial and metropolitan newspapers report the number of shares of each stock traded the first last highest and lowest price for each day, the change in price from the previous day, the range of price during the year and some other information Average prices are also computed and reported to give an idea of the trend from day to day

A few bonds are traded on stock exchanges with their transactions reported in much the same way as transactions in shares But most bonds are handled instead by dealers who ' make a market ' by offering to buy at one price and sell at another Brokers do not become owners of the shares or bonds they handle They are paid a commission for helping to transfer the ownership of a share or a bond from a seller to a buyer Bond dealers, by contrast, do buy from sellers and resell to other buyers The payment for the services of the dealer is the difference between the buying price and the selling price Transactions of this type are said to be carried out "over the counter" Prices of individual transactions are not reported Instead, reports are made of a bid," the price at which a dealer will buy, and an "ask ' the price at which a dealer will sell Unlisted stocks are also traded over the counter

Bond dealers in a financial center are constantly in touch with one another and with dealers in other financial centers, so that bid and ask prices are almost uniform throughout the country, at least for frequently traded bonds.

Some dealers specialize in particular types of bonds For example there are some dealers in New York City who specialize in federal government bonds, others in "municipals ' (the bonds of state and local government units) still others in bonds of business firms Whenever the price at which a seller will sell and the price at which a buyer will buy provide a possible profit for a bond dealer there will be a dealer to work out the trade

While there is a great deal of specialization among the firms operating in organized markets' some firms act as investment banks as brokers and as dealers and they handle almost every type of financial instrument *The term organized markets refers to the whole institutional arrangements* by which financial instruments are issued and traded through investment bankers brokers and dealers It contrasts with the term negotiated markets referred to previously in which an issuer and a holder deal directly with one another

II FINANCIAL INTERMEDIARIES

In the preceding chapter it was explained how a business firm could issue financial instruments in restricted form (for example bonds) in exchange for product even though those who create the product insist on receiving money for their services In general it will be true that those who issue new financial instruments—government business the rest of the world—will want to issue them in restricted form and that those who provide services to produce product will want money The financial transactions as described can only be carried out however if there are some people other than those who provided productive services who want to hold such restricted financial instruments

Each type of instrument represents some kind of claim indicating that the holder has certain rights The special characteristic of money is its general acceptability in exchange for product Capital stock represents other rights to a share in profits usually to participate in the naming of corporate officers and so on Bonds include no right to share in profits but rather to regular interest payments as well as a fixed money payment at some specified future (maturity) date

People who are willing to acquire and hold new financial instruments may want other special characteristics which the issuer whether firm government unit or foreigner may be reluctant to offer For instance, one man may want to be able to transfer small parts of his holdings to others in exchange for money on demand, he wants in other words a high degree of liquidity' He may still want to earn income He wants in short the special characteristic of a savings account A manufacturing firm wishing to hold productive facilities will probably be unwilling to issue a savings account it will want to be sure it can hold the productive facilities indefinitely Another potential holder may want a pension when he is sixty five or life insurance protection Still another may want to share in the profits of business firms but to accept very little risk of loss Some may want money

There are financial transactions that make all the above possible. The existence of financial intermediaries makes it possible for the issuer of a financial instrument to issue it in one form, the holder to acquire it in a second form, and the persons who provide productive services to receive money.

Assume that a firm wishes to hold productive facilities worth $100 000 and that it is willing to issue corporate bonds to the people in exchange for money so that it may give $100 000 in money to those who provide the services to produce the productive facilities. Suppose also that the people are unwilling to hold corporate bonds, but would be willing to hold $100 000 worth of savings accounts.

As before, assume that the people have $100 000 worth of money to begin with. We have

THE PEOPLE

Hold	
Money $100 000	(1)

The people then take this money to a financial intermediary and exchange it for savings accounts worth $100 000. The everyday expression for this is "depositing money," which was an accurate expression before the development of modern financial intermediaries, when people actually did "deposit" money (gold or silver) for safekeeping, but is an inaccurate one today. Expressions like "deposit," "withdrawal," "money in the bank," and the like, which suggest that financial intermediaries are places to *keep* money, are too ingrained in ordinary patterns of speech to do away with; you should remember not to interpret them literally.

As a result of people exchanging their money for savings accounts, we have

FINANCIAL INTERMEDIARY		*THE PEOPLE*		
Holds	*Issues*	*Hold*		
Money $100 000	Savings accounts $100 000	Savings accounts $100 000		(2)

You should recognize this as a financial transaction of the first type, as discussed in the last chapter. The people's claims have changed form, without changing in amount. Since no product has been created, no net product has been taken by the rest of the world, and no deficit financed collective consumption has taken place, the claims held by the people cannot have increased.

The stage is now set for the business firm to issue a restricted financial instrument in the form of a promise (a negotiated IOU note or a corporate bond) to the financial intermediary in exchange for money The people are not affected in this step We have

BUSINESS FIRM

Holds	*Issues*
Money $100 000	Promise $100 000

THE PEOPLE

Hold	
Savings accounts $100 000	

(unchanged)

FINANCIAL INTERMEDIARY

Holds	*Issues*
Promise of firm $100 000	Savings accounts $100 000

(3)

Finally now that the firm has money it can pay those who provide services to create product for it We have

BUSINESS FIRM

Holds	*Issues*
Product $100 000	Promises $100 000

THE PEOPLE

Hold	
Money $100 000 Savings accounts $100 000	

FINANCIAL INTERMEDIARY

Holds	*Issues*
Promise $100 000	Savings accounts $100 000

(4)

Note that the people now have both the savings accounts and the money with which they began and that the business firm now holds product worth $100 000 A financial transaction of the second type has taken place

The introduction of financial intermediaries makes the problem somewhat more complex than those described in the last chapter it also allows for more elaborate arrangements in the economy Three kinds of financial instruments are involved the promise issued by the business firm the savings accounts held by savers and the money received by those who provide services All parties to the transaction are satisfied The business

The assets they hold and the financial instruments they issue are different, however, from those held and issued by most business firms. Financial intermediaries' principal assets are financial instruments issued by others—by business (including other financial intermediaries), by government, by the people as individuals, and by the rest of the world. Of course, other types of businesses do *hold* financial instruments among their assets: they hold money, government bonds, or promises. But for most business firms, the holding of financial instruments is incidental to their primary operations of growing, manufacturing, or selling product. The assets most closely associated with their main business are physical, not financial: productive facilities, inventories of physical product, machinery and the like. With financial intermediaries, the holding of financial instruments is the principal business to them; the ownership of physical productive facilities (vaults, adding machines, and the like) is incidental.

The instruments *issued* by financial intermediaries are different from those of other types of private organizations. The typical private business firm will issue capital stock, bonds, and perhaps negotiated promises. A financial intermediary may also issue any of these same types of instruments, but its principal liability will consist of some kind of *account*. Financial intermediaries are most commonly distinguished from one another according to the type of account issued, although differences also exist with respect to the type of assets held.

The following are some major types of financial intermediaries together with the types of account issued and the types of assets held:

1. *Commercial banks* issue checking accounts and, secondarily, savings accounts (and a few other types of accounts similar to savings accounts) in order to hold a diverse selection of assets. They specialize in the holding of short term negotiated promises of business firms and in the holding of bonds issued by government units, but they also hold promises of homebuyers and of individuals and bonds of private organizations. They do not hold shares of net worth. Because commercial banks issue checking accounts, which are a form of money, special attention must be given to them in later chapters.

2. *Mutual savings and loan associations and mutual savings banks* differ in some respects from each other, mainly by reason of regulations imposed on them, but for purposes of this brief discussion they are quite similar. Both are "mutual" organizations, meaning that technically the holders of accounts are owners of net worth, and receive "dividends" instead of "interest." Both specialize in holding the promises of homebuyers and in issuing savings accounts (technically "savings and loan shares" or "savings bank deposits").

3. *Life insurance companies* are also financial intermediaries issuing "accounts" and holding promises of various types. Why life insurance

companies should be intermediaries requires some discussion and separate treatment is given this later in the chapter

4 *Mutual funds* differ in an important respect from most other financial intermediaries The accounts issued by most financial intermediaries are fixed in dollar value a one dollar savings account acquired today will be worth a dollar ten years from now Because the accounts they issue have fixed dollar values most intermediaries also hold assets that have fixed dollar values that is promises Commercial banks savings and loan associations and life insurance companies for these reasons hold little or no shares of net worth as assets since the value of shares of net worth is subject to change A mutual fund on the other hand does hold shares of net worth as its assets it will purchase and hold shares of capital stock in a large number of firms either specializing in a single industry or type of industries or holding shares in a diverse variety of business types The accounts issued by mutual funds are (like the accounts issued by all mutual organizations) shares of net worth The dollar value of these accounts is not fixed as is that of a savings account but varies as the value of net worth of the mutual fund varies—that is as the value of the shares of net worth held by the mutual fund varies Mutual funds satisfy the needs of business firms that want to issue their own individual shares of net worth and of individuals who want to hold net worth type financial instruments without putting all their eggs in one basket by taking the risks involved in buying single shares of net worth in individual corporations

5 *Pension funds* are another type of financial intermediary They acquire income yielding financial instruments so that they may make regular money payments to those eligible for pensions under the terms of the fund There are several varieties of pension funds Some types hold only promises while others also hold shares of net worth

6 *Social security* is a government operated program which for many individuals serves the same purposes as a pension fund Whether social security may properly be regarded as a financial intermediary has been the subject of some dispute, so this program will require somewhat more detailed discussion later in the chapter

Arrangements Allowed by Financial Intermediation

The existence of financial intermediaries once again, allows the original issuers of financial instruments to issue them in a form appropriate to the purposes for which the instrument is issued, and for the ultimate holders of the financial instruments—the people—to hold them in a different form a form appropriate to the purposes for which they decide to hold financial instruments Financial intermediaries thus bring together in a financial relationship parties—issuers and holders—who would otherwise not be brought together

Without the existence of financial intermediaries you would probably be unwilling unless you are quite wealthy to hold promises of house buyers of small business firms of the federal government and of individuals purchasing appliances and automobiles on time Through financial intermediation however you do hold such instruments indirectly if you own a savings account or a checking account As you will see in later chapters even pocket money technically currency is an account at a special type of financial intermediary—a Federal Reserve bank If you own currency *you are the indirect holder of a variety of financial instruments especially* federal government promises

For each account issued by a financial intermediary and held by someone and for each promise or share of net worth issued by someone or some organization there is an indirect financial relationship Because of the variety of financial intermediaries and the wide variety of accounts they issue and financial instruments they hold there are a large number of possible types of indirect financial relationships The following are some of the more common types of indirect financial relationships offered as examples of the arrangements made possible through financial intermediation

1 As noted some people may want to hold net worth type financial instruments but may not want to take the risks inherent in restricting their holdings to the shares of net worth of one or just a few corporations Mutual funds allow a large number of people to pool their wealth and buy a variety of shares of net worth The relationship involved here is that the people hold shares of net worth indirectly

2 Similarly in holding certain types of life insurance policies and in holding checking accounts savings accounts and similar financial instruments issued by financial intermediaries the people can hold the promises of business firms indirectly without taking the risks inherent in concentrating their holdings in the promises of a few corporations partnerships proprietorships Another advantage offered by an account with a financial intermediary is *divisibility* the holder of a $1000 corporate bond must sell the entire bond if he needs money the man with small holding might be happier with a savings account which allows him to exchange his financial instrument for as little money as he desires

3 It is well known that the public debt—all current obligations of the federal government reflecting the net accumulation of budget deficits—is something we owe to ourselves Few people realize however that something over one half of the public debt is held by the people indirectly through some kind of financial relationship involving intermediaries (including government agencies such as the Social Security Administration) If you hold a checking account, a savings account, certain kinds of life

insurance policies or a social security account you certainly hold part of the public debt

4 Financial intermediaries also allow some individuals to hold financial instruments issued by other individuals in the same indirect way A car buyer may issue a promise to a commercial bank if you hold an account at a commercial bank you are the indirect holder of his promise In fact many people indirectly hold a part of their own promises by maintaining accounts at the same intermediaries that hold their promises

5 Another arrangement made possible through the existence of financial intermediaries—commercial banks in particular—is the monetization of promises Monetization means just what it sounds like conversion into money Checking accounts as noted are a type of money Commercial banks acquire promises and issue checking accounts This means that instead of holding promises the people hold money the original promise has been monetized Currency as noted is another type of money Federal Reserve banks acquire financial instruments especially government bonds and issue currency This means that instead of holding government bonds the people hold money the government bonds have been monetized As later chapters will show all our money represents the monetization of promises originally issued by the people government business and the rest of the world

Life Insurance Companies as Financial Intermediaries

The insurance principle does not necessarily involve financial intermediation Insurance is a system by which a large number of people can bear together the risks of certain eventualities For instance you do not know whether your home will burn down this year No one can predict accurately whether any particular building will burn But it is possible to predict with a high degree of accuracy *how many* homes will burn down in a given year Fire insurance is a device by which all home owners can bear together the costs involved in houses burning down regardless of whose home burns The premium you pay is your share of the losses incurred in houses burning down (plus costs of administration)

Life insurance could conceivably operate on the same basis If life insurance companies provided insurance on only a year to year basis with each policyholder paying each year according to the risk of his death during that year (according to his age) annual premiums received by the insurance companies would just about equal annual payments to the beneficiaries of policyholders who died during the year (plus costs of administration) Because foresight is not perfect the two would never balance out exactly evenly so in years in which premiums exceeded payments life insurance companies would acquire financial instruments and in years in which payments exceeded premiums they would exchange these instruments for money to pay to beneficiaries The amount of financial instruments held by life insurance companies would be fairly small under such an insurance system

This kind of life insurance is available it is called term insurance, or one year term insurance With term insurance the older you get the higher are your premiums because risk of death increases with age For *this reason other types of insurance are available and are generally more* popular Because other types of insurance exist life insurance companies have occasion to hold large amounts of financial instruments and in fact are one of our most important types of financial intermediaries

Life insurance agreements are becoming more and more specialized If you want some particular feature incorporated in your policy you can probably find a company that will give it to you The following are some *basic* types of insurance coverage available but do not exhaust all the possibilities

1 *Many life insurance contracts are written on the level* premium plan Unlike term insurance under the level premium plan the policyholder pays the same amount each year to the company even though the risk of death increases with age When the policyholder is young and the risk of death is low he makes higher payments than would be appropriate according to his risk of death The overpayments accumulate as an account with the life insurance company very similar in some respects to a savings account If the policyholder were to cancel his account, some money would be refunded to him It is therefore said that such an insurance policy has a cash value and the policy is sometimes referred to as cash value life insurance More commonly this kind of insurance is referred to as straight life

Sometimes instead of making the same payments in later years as during youth a policyholder may want to make no payments at all after he reaches a certain age and still retain his insurance coverage Such a plan would increase further the premiums he pays during the years in which he does pay premiums This kind of insurance is described as limited payment straight life.

2 Some life insurance contracts provide not only for a payment to a beneficiary if the policyholder should die during the period of the contract, but also for a payment or a series of payments to the policyholder himself if he should live beyond a certain age In such a case the policyholder not only has to pay the company enough to provide insurance protection but also has to pay an additional amount to accumulate the sum that is to be paid to him at a later date if he lives Whatever amount the policyholder pays in excess of the amounts necessary because of risk and

administrative cost is credited to him in his account with the company This kind of insurance is called endowment

3 In many cases when a policyholder dies the beneficiary does not receive a single lump sum instead the principal sum remains with the insurance company and the beneficiary takes a monthly or annual payment In such a case a declining principal sum remains with the company as an account in the name of the beneficiary Similarly under an endowment policy the policyholder may take regular payments rather than a single principal sum when the policy matures During the period of payment the policyholder has an account with the insurance company Regular payments such as these made either to the policyholder himself or to his beneficiaries if he dies are called annuities

In each of these three cases the account at a life insurance company should be thought of as a financial instrument issued by the insurance company and held by either the policyholder or his beneficiary As in the case of other financial intermediaries a life insurance company not only issues accounts but holds financial instruments—particularly promises of house buyers business and government units

4 Life insurance companies also handle pension programs for individuals or groups of individuals such as the employees of a business firm or the members of a labor union These programs involve an agreement whereby payments are made by individuals or by a firm on behalf of individuals during the period of employment and payments are made to individuals during the period of their retirement Especially during the early years of such agreement more money will come in as payments to the insurance companies than will go out as payments made by them Thus the payments establish a kind of account owned jointly by those who are building up retirement benefits

The privilege of exchanging these accounts for money prior to retirement may be severely limited and in many cases nonexistent Nevertheless while the program is in effect those who are covered by such a retirement program hold a kind of account which comes under the general category of financial instruments issued by financial intermediaries Members of the plan then are also indirect holders of other financial instruments originally issued by government business and so on

Social Security

Not all pension funds however are administered by life insurance companies When the trust departments of commercial banks administer pension funds each fund is kept separate and the financial instruments held by the funds are kept separate from those owned by the banks on behalf of ordinary depositors Labor unions also sometimes maintain pension funds

All such pension funds are members of a class of financial intermediary They provide an arrangement through which the people hold indirectly the financial instruments issued by business firms and government units

State governments administer pension funds for the employees of state and local government units The financial instruments held by these funds are primarily bonds issued by federal, state, and local governments, these instruments are, of course, held indirectly by those holding "accounts" issued by the pension funds

At first glance, the federal social security program may seem to be just another type of pension fund This is so because it does hold financial instruments (including the largest share of the federal public debt held by any one holder) and makes payments to account holders in the same manner that pension funds do There are differences, however, and the interpretation of what social security "really" is has become a matter of controversy

Under social security is an unemployment compensation program, administered by the fifty states, and an old age and survivors' insurance program administered by the federal government Contributions to social security take the form of payroll taxes, part of which are paid by employees and part of which are paid on behalf of the employees by the employers Payments are credited to the Social Security Trust Funds, and payments are made from the Funds to individuals who are unemployed or retired, or to the survivors (beneficiaries) of persons covered by the social security program

The social security program has been in effect since 1937 In its early years payments to the Trust Funds were far greater than payments from the Funds As a consequence, the administrators of the program have accumulated over $50 billion worth of federal government bonds in the name of the Trust Funds

In recent years, payments to the Funds and payments from them have been just about equal, so that the amount of government bonds held has remained fairly constant The reason for this change to a balanced budget operation has been primarily that the benefits under the old age and survivors' insurance program have been increased by law by more than the payroll taxes have been increased

As noted, there are two ways of viewing the social security program First it might be said that those who are covered by the program are the indirect holders of the $50 billion worth of government bonds held by the Trust Funds Under such a view, the social security program is to be considered a financial intermediary, and those covered are to be considered holders of "accounts" issued by the Trust Funds

Instead, you might just as easily consider payroll taxes as essentially the same as other taxes, and consider payments to beneficiaries of the social security program the same as payments to other recipients of government transfer payments In such a view the social security program is not a separate financial intermediary but is just another operation of the federal government The federal government in such a view has issued some bonds that it holds itself we would have to subtract this amount from the public debt

When it was introduced the social security program was made palatable to some who opposed the notion of a welfare state by giving it some of the features of an insurance program The controversy is whether the program is really part of a welfare state approach involving a government obligation to take care of unemployed older and widowed persons or whether it simply follows insurance principles

You can look at the program either way but you should be consistent You can say that the people who are covered by the social security program hold accounts that represent indirect holdings of government bonds In such a case you say that the public debt is approximately $300 billion Or you can say that the bonds held by the Social Security Trust Funds are irrelevant and that the public debt is about $250 billion If you call the social security program a welfare state program you should not report the public debt as $300 billion

The preceding discussion accounts for the most important types of financial intermediaries and financial institutions and describes the most common ways in which people hold original financial instruments indirectly The financial structure of the economy is of course considerably more involved than can be described in a few pages in an introductory approach to economics and the variations in the financial instruments made available to the public is very great There are counselors who will advise you on the combination of financial instruments you should hold And if your situation seems to require a kind of financial instrument not now available you could probably find an intermediary willing to tailor one to your purposes

III WHEN ARE YOU SAVING?

Most people tend to think about their saving in simplified stereotyped terms If they have something left over after they have met their regular monthly obligations they may take their leftover money and put it into a savings account a U S savings bond or some other instrument The newly acquired instrument is thought of as their new savings

Aside from the fact that money is not put into savings accounts or other instruments but exchanged for them there are two things wrong with this conception

First several of most families monthly obligations will involve saving instead of taking product The monthly paycheck may show deductions for a pension fund for social security taxes for a payroll savings plan and for other regular savings commitments There is some saving done then even before the family is paid money Part of the take home pay may be used to pay a life insurance premium (part of which is likely to involve saving) or make a monthly Christmas Club or mutual fund payment A large part of the paycheck is often used to make a mortgage loan payment which means increasing your equity in a house For most people then savings are not just what is left over but are part of the regular obligations of the household

Second the *money* left over is part of the family s savings even before it is used to acquire a savings account There is an apparent reluctance on the part of most people to include money as part of their savings and such people do not think of themselves as actually having saved until they have acquired some some nonmoney financial instrument There is no reason for you to share their illusions At this point whether families regard their money as part of their savings is not important What is important is that money is a financial instrument and when it is held by the people does constitute part of their savings

Most people then do a lot more saving than they think they do and what is more they do much more systematic saving than they are aware of This fact will be of significance later when you see the relationship of saving and investment to economic instability

9

COMMERCIAL BANKS AND MONEY

Because financial arrangements are of such importance in the American economy a major role is assumed by financial institutions and financial intermediaries whose common function it is to bring together directly or indirectly the issuers and holders of financial instruments Financial intermediaries by doing so permit issuers of financial instruments to issue them in one form and holders to hold them in another—in the form of some kind of account

Perhaps the most important type of financial intermediary mentioned in the last chapter is the *commercial bank* The 14 000 American commercial banks do about one third (in dollars) of all the intermediation in the United States

Any United States bank with checking accounts among its liabilities is a commercial bank The word commercial appears in the name because these institutions were originally created to fill the needs of commerce as opposed to industry With the growth of appliance and home loans and other types of lending the commercial aspect is not as important as it once was and perhaps a better name today would be checking account banks [1] But the name commercial bank is well established and must be used here

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[1] Commercial banks also issue savings accounts and other specialized types of accounts but these other accounts may be ignored in this discussion because they do not involve any important distinction between commercial banks and other intermediaries

I WHY STUDY COMMERCIAL BANKS?

Everything said so far about financial intermediaries in general also applies to commercial banks They acquire promises and issue accounts. Like other intermediaries they provide for indirect ownership of promises of original issuers which in this case include individuals business firms government units and foreigners in all categories. If commercial banks are just another type of financial intermediary why is separate—and extensive—treatment of them necessary? Why this chapter and the two that follow?

In the first place commercial banks are not just another type of financial intermediary There is a small but crucial difference between them and the others The accounts issued by commercial banks—checking accounts—are a form of money

Even this fact would not require special treatment of commercial banks were it not for four other factors

1 The fact that the accounts issued by commercial banks are a form of money means that they are created in a way different from such other accounts as savings accounts life insurance accounts and the like

2 There is a considerable amount of misunderstanding concerning the subject of money leading to some resistance to the basic principles involved It seems necessary not only to tell you how the money system works but to make sure you are convinced that it does work that way and that you are satisfied that there is nothing fundamentally wrong with it working that way

Moreover many people talk about money when they really mean something else You have probably read the boasting by important firms about how much money they have put in circulation in the area through their large payrolls or have heard politicians favor (or condemn) government spending on the grounds that it puts more money in circulation It is useful to examine the transactions that actually *do* put more money in circulation

3 Despite the fact that some people may talk about money when they really mean something else money itself may from time to time actually deserve some attention As a matter of fact the money system is a prime focus for government policy affecting aggregate employment income and the price level Because monetary policy' is important some attention must be given to the money system and to commercial banks

4 In everyday speech the word 'money —or dollars'—is given a number of meanings Many of them fall into two categories

(a) Money is a special type of financial instrument one generally acceptable in exchange for product or services In the United States money consists of checking accounts and currency This is the only meaning used in this book for money

(b) But the word "money" is also used sometimes carelessly as a measure of the value of things This usage accounts for such common but misleading expressions as "How much money do you make?" (The reference is not of course, really to *making* money, which would usually involve counterfeiting) I put my money in a savings account " or My money is in real estate " (Nothing of course, was actually *put into* anything The man whose "money is in real estate" does not really mean he has buried some currency in the ground)

To be precise, and to avoid confusion this book must make a distinction between "money" and 'money's worth " For the expressions above, you would have to substitute "How much income do you earn?" (or ' How many dollars' worth of income do you earn?") and "I exchanged my money for a savings account of equal value " or ' My wealth is held in the form of real estate "

People commonly use "money" in both ways, without making a distinction This practice probably accounts for the almost mystical way in which many people approach the subject of money If they are told for instance, that a certain institution *creates* $10,000 worth of money, they think of the act as being similar to the creation of $10 000 worth of real estate or $10 000 worth of product The creation of money seems almost magical The new appearance of ***dollars*** is confused with the new appearance of ***dollars' worth*** For this reason, it is worthwhile noting now that the institutions that in the United States are responsible for creating money perform nothing magical, and actually create no new ***dollars' worth*** at all

You may work hard to "make money" Certain institutions "make money" with no effort at all This situation would seem unfair to anyone who thought of the expression "make money" as meaning the same thing in both sentences

II CREATION OF ACCOUNTS AT FINANCIAL INTERMEDIARIES

All financial intermediaries are alike in one respect They hold financial instruments as assets, and issue other financial instruments as liabilities and as shares of net worth This means that if you hold a financial instrument issued by a financial intermediary—a savings account, a mutual fund certificate, or even money—you are indirectly holding a promise or share of net worth issued by one of the economy's ultimate issuers

This relationship holds true for all type of financial intermediaries There is a significant difference, however, in the manner in which the rela tionship is first established for different types of financial intermediaries Accounts at financial intermediaries come into existence in essentially two different ways depending on the type of account involved

The first way in which an account might come into existence is the simpler of the two, because it conforms with "common sense"—that is with ideas you probably already have How do you get an account at a financial intermediary? In most cases the answer you would immediately give would be the correct answer you would give money for it.

For example, if you wanted an account at a savings and loan association you would bring money to the association and give it up in exchange for an account. As far as you are concerned, you are giving up one type of financial asset in order to hold another As far as the savings and loan association is concerned it has a new liability—your account—and a new asset—the money you brought it. The association then transfers the money to a house buyer in exchange for a house buyer's promise. The savings and loan association has then done what you first did it has changed the form in which it holds assets giving up money in order to hold another type of financial instrument. By these transactions, you have an account at a savings and loan association and less money, someone else has the money you formerly had No other accounts are affected, for the economy as a whole, there is an increase in the accounts of savings and loan associations, and there is no change in the amount of money The counterpart of your account at the savings and loan association is the new promise of the house buyer

One thing to note is that the savings and loan association dealt separately with the promisor (borrower) and account owner(saver) Unless a commercial bank is involved, financial intermediation always takes two steps (1) someone gives the financial intermediary money in exchange for an account or an increase in the value of an existing account, and then (2) the intermediary gives a borrower (or issuer of a share of net worth) the money in exchange for a financial instrument.

The reason such intermediation takes two steps is that the borrower and the account owner will necessarily be two different persons. If you wanted to borrow from a savings and loan association, you could give it a promise, and it could give you a savings account in exchange, only one transaction would be required But if you are a borrower, you will not want a savings account. You will want money If you want money, two steps are required

This two-step method of creating accounts applies to almost all financial intermediaries and to almost all types of accounts It applies to mutual funds and investment trusts to savings banks and savings and loan associations, and to insurance companies, both "stock" and "mutual." It applies then, to such accounts as mutual fund certificates, savings accounts and insurance policy accounts It does not apply to commercial banks or to the accounts they issue checking accounts which are a form of money The two-step explanation applies only to nonmoney accounts

The first step in explaining how nonmoney accounts come into existence is to say that you bring money to the financial intermediary But when the subject is commercial banks the question must be Where did money come from in the first place? By what transactions does money come into existence?

Money Issuing Banks

Where does money come from? For the answer to this question it is necessary to consider the operation of money issuing banks because accounts at money issuing banks *are* money Money is an account at a money issuing bank

In the United States there are two types of money issuing banks

1 Commercial banks which issue checking accounts and
2 Federal Reserve banks which issue currency

Federal Reserve banks will be discussed in the next chapter This chapter will concentrate on commercial banks In this chapter and the next in order to avoid constant repetition of the somewhat awkward expression money issuing bank(s) the expression bank(s) is used alone to signify commercial banks and/or Federal Reserve banks It should be understood that savings banks and investment banks are specifically excluded when the word bank(s) is used alone

In this discussion as in other areas in economics there is an important difference between the whole and the part sometimes reference will be made to the banks referring to all banks considered together and sometimes reference will be made to a bank or your bank referring to one single bank alone

Registered and ‘Unregistered Money

Money is what you commonly receive when you work and surrender when you pay your bills Most bills are paid by checks which transfer the ownership of checking accounts at banks The account not the check is money The check is simply a means of transferring the ownership of an account Most currency the other means of paying a bill is also in a sense an account at a bank The banks that provide currency—the Federal Reserve banks—issue Federal Reserve notes which are passed from hand to hand in paying bills In the case of Federal Reserve money the currency and not the account is considered to be money If you write a check to pay a bill and then accidentally destroy the check you have destroyed no money, but if you accidentally destroy currency the money is gone account by the deposit of currency someone else is decreasing a checking account by a withdrawal of currency The taking of currency to banks by people does not explain an increase in the total amount of checking accounts owned by the people (except on a seasonal basis—during some seasons more people bring currency to the banks than withdraw currency and in other seasons the process is reversed) In any event bringing currency to the banks could only increase the amount of checking account money it could not explain an increase in the total amount of money

The checking accounts of business firms and individuals increased in value from approximately $75 billion to almost $120 billion between 1946 and 1963 If this increase of about $45 billion in value of checking accounts is not explained by the bringing of checks and/or currency to the banks what does explain the increase?

III THE ORIGINS OF CHECKING ACCOUNTS

Suppose you operate a small manufacturing firm and wish to expand your inventory preparatory to the Christmas season You go to your bank and negotiate a loan giving the bank a *promissory note* Ordinarily the bank will then simply make an addition to your checking account as a way of giving you the money you have borrowed That is all there is to creation of checking accounts

In T account (1) you are shown to have borrowed $5000 The bank s assets have increased since the bank now holds your promise and the bank s liabilities have increased since you now hold a checking account at the bank The increase in your checking account was not accompanied by a decline in anyone else s checking account Instead the total amount of checking accounts has increased Your new checking account is also new money

FIRST NATIONAL BANK

Holds		*Issues*		
Your promise to pay the bank	$5000	Your checking account	$5000	(1)

For emphasis it should be repeated that when you borrowed $5000 from the bank the bank did not have to get the money from anywhere It simply issued a new checking account to you

This transaction explains what is meant by the often used expression banks create money Banks issue money in exchange for promises Other financial intermediaries create other types of accounts (such as savings accounts) when they act as intermediaries between promisors and account holders But banks alone create money when they act as intermediaries between promisors and account holders

The major difference between the operations of banks and of other financial intermediaries must be emphasized not because these intermediaries are so different (they are really essentially alike in most respects), but because the distinction is necessary to understand the origin of money With intermediaries other than banks (savings and loan associations, for example), there are two separate transactions, two distinct steps some people bring money in exchange for new accounts or for additions to old accounts, *other* people and production groups bring promises in exchange for that same money With banks these two transactions are merged into one The creation of checking accounts requires only one distinct step When a bank acquires the promise and issues a new checking account, the person from whom it acquires the promise and the person to whom the new account is issued are the same That same person may immediately or later transfer that new account to someone else, but he gets the account first, in direct exchange for a promise

Return for a moment to the illustration Your firm has been issued a new checking account in exchange for a promise and it is easily seen that total checking accounts have thereby been increased But you are not going to hold that checking account indefinitely You borrowed in order to expand your inventory You will write checks to transfer that account to someone else When you have spent the entire checking account, does the new money disappear? The checking account disappears from *your* bank, but when your checks are deposited in other banks, the checking accounts of others *increase* *Spending money does not destroy money*, *it merely transfers it to someone else*

Before you have spent the money, the financial relationship corresponds to the first type of financial transaction described in Chapter 7 you and the bank have merely exchanged financial instruments In holding a checking account you are *indirectly* holding your *own* promise But when the money is spent and falls into the hands of those who did not acquire it by borrowing the financial intermediation is complete You have issued a promise someone else holds your promise indirectly by holding money *The financial relationship is now no different from that brought into existence* through the intermediation of insurance companies savings and loan associations and other intermediaries You have issued a promise, which someone else holds indirectly in the form of an account at a financial intermediary

When you spend the money and your checking account is depleted and someone else s increased it is likely that the liabilities of your bank—its total accounts issued—will decline This is so because it is unlikely that your check will be redeposited in the very same bank on which it was *drawn* *As your bank's liabilities* decline, its assets must also decline This points up a very special administrative problem faced by commercial banks and to some extent by other intermediaries but not generally faced by other types of businesses Banks liabilities are subject to transfer by check and may fluctuate in amount Nonfinancial corporations which may issue liabilities in the form of long term bonds do not face the problem of fluctuating liabilities and may be fairly sure that they can hold their assets for a long time Banks do not enjoy the luxury of such assurance

How banks manage to transfer assets when their liabilities are transferred by check will be discussed in the next chapter At this point it can only be noted that because banks are subject to swings in the value of their liabilities some of their assets must be extremely liquid—that is quickly salable without significant loss in value In fact banks must keep some *money*—currency and checking accounts at other banks—among their assets But the amount of money held by banks will rarely exceed 2 percent or 3 percent of their total assets This is a far cry from the image many people have of banks as places to keep money

In fact many people seem to think that they supply the banks with money The truth is the reverse the banks supply the people—and business firms—with money

Repayment of Bank Loans Destroys Money

The general rule then is that banks issue new checking accounts—new money—when they acquire the promises of borrowers such as your manufacturing firm The rule also follows that when the loans are repaid and the promises canceled the money is destroyed

After the Christmas season your manufacturing firm will have accumulated some money as receipts for the sale of product You will now pay off your bank loan You write a check for $5000 and give it to the bank in exchange for your promise which is then canceled The bank which now has your check deducts $5000 from your account You now have $5000 less in money and no one else has any more money The money has been destroyed

When bank loans are repaid then total checking accounts decline

This raises a problem Since every loan presumably will someday be repaid so that all checking accounts created by bank lending are eventually destroyed how does the money supply ever increase? How did total checking account increase by some $45 billion since the end of World War II?

The growth of checking accounts over these years means that during that time more was borrowed than was paid back to commercial banks This conclusion does not mean that loans were defaulted upon but instead that borrowing from commercial banks has generally been increasing in the post time is very likely to be different from the person to whom the checking account was originally issued Second the willingness of the people to accept bank accounts—money—can be taken for granted Anyone will accept currency or checking accounts although he may soon pass this money on to someone else

When you want to know how much money can be created—the value of checking accounts that can be issued—you focus not on the willingness of people to hold the accounts but on the promises coming into banks (The size of the money supply is effectively limited however by federal regulation as will be discussed in Chapter 11 as well as by the willingness of people to issue promises and by the willingness of bankers to accept them)

But the willingness to accept *savings* accounts cannot be taken for granted When you want to know the value of savings accounts that can be issued you focus *both* on the promises coming into savings and loan associations and savings banks *and* on the willingness of people to accept such accounts in exchange for money The people must *first* show their willingness to own savings accounts *then* and only then may the promises be acquired by the financial intermediary

In short holding someone else's promises indirectly by holding money usually requires no initiative by the money holder You are paid in the form of money until you spend it and you do not spend it all immediately upon being paid When you hold money you are participating in a financial relationship even if you hold money for a few days that money still corresponds to a promise issued by someone else On the other hand holding someone else's promises indirectly by holding a savings account does require initiative by the account holder You must go to a savings and loan association or other financial intermediary that issues savings accounts and exchange money for such an account In the case of banks the only initiative required is that of the borrower in the case of other intermediaries initiative is required on the part of the borrower and of the holder of the account

Who Actually "Creates" Money?

Some additional illustrations involving several basic types of checking account creating transactions should serve to iron out difficulties both in understanding the process by which banks "create" money and in being able to believe that banks *do* "create" money

First let us see who "creates" what Suppose you have been employed by a business firm for a week and today Friday is payday The company has the product of your services (unfinished commodities held as inventory), and it records on its books that the services you have provided are valued at $100 The difficulty is that while your part in the production process is complete the product is not really "finished" Your job, let us say was to assemble, wire, and solder the basic components of a transistorized portable radio But before it can be sold, the radio must be aligned, *tested and inserted in a cabinet Not having yet sold the product of your* labors the business firm has no money What can it do in order to pay you?

Perhaps the firm will take a legal looking piece of parchment paper and write on it "The Kleer Aza Bell Radio Co promises to pay the bearer of this certificate $100 on demand" If you accept this instrument as settlement of the firm's obligations toward you and find that your grocer, landlord and banker are also willing to accept it as a means of payment, the *certificate written out by the firm will constitute money* The firm, in that case would have by itself created money It would have issued money as a liability to allow itself to hold product

This type of transaction, in which a firm, in technical terms, "draws a draft against itself' is not today as common as it once was A very similar transaction is more common state and local government units often make payments by writing checks (sometimes called "warrants") not against *checking accounts in commercial banks, but against their own treasuries*

There are several reasons however, why the Kleer Aza Bell Radio Co is not likely to create such an instrument In the first place, it would probably be unable to 'pay the bearer on demand"—that is, be prepared to give currency or a checking account to some future holder at any time the holder wanted, and it would hence prefer to issue a restricted financial instrument Furthermore your grocer, landlord, and banker would not be *likely to be willing to accept the instrument as a means of payment, and be*cause they would be unwilling to accept the instrument from you, you would be unwilling to accept it from the business firm

But the radio firm has open to it a course of action that is tantamount to issuing money The firm cannot issue money, but it can issue a financial instrument—one by which the firm promises to pay a bank (not "the bearer') $100 at the expiration of, say, ninety days (not 'on de*mand) If a bank is willing to accept the firm's promissory note, the firm* will be issued a checking account, which the firm may transfer to you in settlement of its obligation to pay you

The *role of the bank, then, is not to "create anything* The *radio* firm creates the new financial instrument so it can hold product The role of the bank is to monetize" the firm s promise—to transform" it into a form which is acceptable to you—money

When *the employer gives the* promise to the bank and receives a checking account in exchange the relationship will be of this sort

KLEER ARA BELL RADIO CO		*FIRST NATIONAL BANK*	
Holds	*Issues*	*Holds*	*Issues*
Checking account $100	Promise to pay bank in 90 days $100	Promises of Kleer Ara Bell Radio Co $100	Kleer Ara Bell's money $100
Unfinished radios $100	Your claim against firm (obligation to pay your wages) $100		
			(2)

Thus far you have created product by providing $100 worth of services and you have a claim against the firm valued at $100. The firm holds product by virtue of your claim against it. The firm has also issued a promise in order to hold money. The bank has issued an account in order to hold a promise.

When you are paid the money, the firm will no longer hold the money and will no longer have an obligation to pay you. You will have the money and the records of the firm and the bank will show

KLEER ARA BELL RADIO CO		*FIRST NATIONAL BANK*	
Holds	*Issues*	*Holds*	*Issues*
Unfinished radios $100	Promise to pay bank in 90 days $100	Promise of Kleer Ara Bell Radio Co $100	Your money $100
			(3)

Two points may be noted. (1) Money has been created in this example. There is $100 more worth of money than there was before. The process by which money was created was that a bank acquired a promise and issued an account. But (2) the bank, though it issued money, did not really *create* anything—did not create new dollars' worth. Its role was to "monetize" a promise.

When the radios are finally aligned, tested, assembled, and sold, and the firm acquires money from the sale of them, it can surrender the money to the bank as it promised to do. The bank merely reduces the company's checking account by $100 and returns the canceled promise to the firm. Since the company will at that point have less money and since no one else will have any more money (why won't the bank have the money?), the total amount of money will be reduced by $100.

IV MONETIZING ASSETS

To recapitulate the theme so far people provide services and create product and in an advanced interdependent economy they take product *of equal value but not necessarily the same product they have created* Such an economy needs a set of arrangements through which services may be exchanged for product In all economies in which people create one product but may take another there is some type of money In the American economy money is an account at a particular type of financial intermediary

When people provide services to a firm to create product the firm may issue a promise to a bank The bank monetizes the promise giving the firm a checking account (or increases the value of the firm s existing checking account) The money is then given to the people who no longer have claims against the firm but have generalized claims to product When the people (not necessarily the same individuals) take the product they surrender money to the firm The firm then surrenders the money to the bank The promise is canceled and the money is destroyed

Under such a system money appears when it is needed to accommodate the people s desires to take product other than that which they have created and money disappears when it is no longer needed when the product has been taken

Money s Many Roles

If money comes into existence only to effect an exchange and goes out of existence when the exchange is concluded why should there *always* be money in existence? It would seem there should be money in existence only in the interim between the creation of product and the taking of product by the people

There are several reasons why you will never find that all money has disappeared

First all transactions do not take place simultaneously in neat separate periods Firms will always have some unsold product and people will always have some unspent money

Second some people want to hold money more or less indefinitely *While people who want to save ordinarily want to hold an instrument that* provides ownership income (interest or dividends) life insurance protection or some other advantage there are certain advantages in holding money If you are a person who does not want to let his checking account balance get below say $200 you fall into the category of those who want to hold money indefinitely

Third and most important firms also want to hold money indefinitely *As was noted at the end of Chapter 7* precautionary or oppor tunistic motives lead business firms to hold more money than is held by any other sector

And fourth money is not only used to effect an exchange of services for new product created but is also used for the exchange of already existing asset both physical and financial

Hence there is no exact correspondence between the amount of money in existence at any time and the amount of economic activity going on at that time This is one reason why attempts to prove that the amount of money in existence affects the level of economic activity or the level of prices ordinarily have failed

Monetizing 'Old' Assets

Moreover there is no exact correspondence at any time between the amount of borrowing from banks and the amount of money in existence Banks are like other production groups in that when they want to hold something as an asset they must issue something as a liability or as net worth When banks acquire an asset they can issue a new checking account as a liability The newly acquired asset does not have to be a new promise of a business firm

For instance assume that you own a $1000 government bond representing a promise the government has made to surrender $1000 worth of money to you at some specified future time You decide to buy a new automobile and find that once the trade in value of your present car has been deducted from the price of the automobile you still need $1000 worth of money to complete the transaction

If the automobile dealer wants a $1000 government bond you might simply give him the bond and take the car But such a transaction is unusual government bonds are not usually employed as money—that is, as a means of payment

So you will sell your bond To simplify the matter assume that you sell the bond directly to a bank although ordinarily a bond dealer would intervene between you and the buyer You give the bond to the bank and the bank gives you a checking account worth $1000 For the bank, we would have

SECOND NATIONAL BANK

Holds	*Issues*
Government promise $1000	Your money $1000

(4)

10

FEDERAL RESERVE BANKS, THE TREASURY, AND MONEY

Money it has been noted consists in the United States of checking accounts and currency The preceding chapter explained the origins of money that takes the form of checking accounts the form that comprises approximately 80 percent of the formally counted money supply It remains to discuss the origins of currency the form of money that comprises the remaining 20 percent

Many people begin the study of economics with two preconceptions about money preconceptions that are decidedly misconceptions and although the analysis presented in the preceding chapter in this chapter and in the next chapter should prove sufficient to dispel these ideas perhaps it is wise to deal separately and specifically with them The first is that since ordinarily you take money to the bank to get a checking account checking accounts are not money but merely represent money Checking accounts are widely used to pay individuals for their productive services and to buy product and thus themselves satisfy the definition of money Implicit in the misconception is the idea that *currency* and money are identical that the two words are mutually interchangeable Currency is a *type* of money but *money and currency are not identical*

The second misconception follows in part from the first Many people when asked to explain the origin of money will say that it is issued by the federal government You have already explored the origin of checking accounts and hence can be sure that at least 80 percent of the money supply is not issued by government but by commercial banks The people who rely on some government activity to explain the existence of money really once again have in mind currency But federal government activity accounts for only a small (and declining) fraction even of currency in existence and for an even smaller fraction (about 3 percent) of the total money supply Because of the relative insignificance of government issued money we may deal with U S Treasury money as an exceptional case rather than as the rule in explaining the origins of money

I THE SOURCE OF CURRENCY

Checking accounts it will be recalled come about as the result of a borrowing or other transaction by which the banks[1] come to hold financial instruments that they did not formerly hold Checking accounts once in existence need not be owned by the persons or groups to whom the banks originally issued them but instead can be transferred to others so that your own holding of money does not necessarily imply that you borrowed from or sold a previously existing promise to a bank

Suppose that some of those who have checking accounts want currency In effect these people would be saying that they no longer want the ownership of their money recorded They want money that can be transferred without checks endorsements and deposit slips (and without question)

The transactions that give rise to the existence of currency are in essence very simple The people come to the banks to exchange their checking accounts for currency The banks simply record a reduction in the checking accounts of their customers print an equivalent amount of currency and give it to their customers and record an increase in currency issued The amount of money owned by business firms and by individuals remains the same the only difference is that a greater part of this money is unregistered

If you would like to argue that your bank—the commercial bank with which you do business—does nothing of the kind and that if it did print currency you would call the F B I just remember that your bank is not the subject of discussion When you consider all money issuing banks (the commercial banks and the Federal Reserve banks) your exchanging a checking account for currency (cashing a check) does nothing but change the form in which you hold money and change the form in which all money is held Perhaps this can be seen more clearly if the major accounts of money issuing banks are put together as in T account (1)

Actually these accounts are split up among a large number of banks But when they are considered together you can easily see that currency issued can increase and checking accounts decrease with no change either in the assets of the banks or in the total supply of money

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[1] Recall that the expression the banks is used here as an abbreviation for the expression money issuing banks and includes the commercial banks and the Federal Reserve banks but *not* investment banks savings banks blood banks etc.

ALL MONEY ISSUING BANKS MAJOR ACCOUNTS

(*in billions of dollars*)

Assets held		Accounts issued		
Promises of business firms government units and individuals	$104	Currency issued	$25	
Gold certificates *	21	Checking accounts recorded as customers money	100	
	$125		$125	(1)

* Gold certificates are special financial instruments issued by the U S Treasury Department and held as assets by the Federal Reserve banks Their meaning origin and use will be discussed later in this chapter

Considering all money issuing banks together does however effectively obliterate from the record a number of complicating transactions *among* banks for the particular banks that issue currency do not issue checking accounts and vice versa The preceding chapter included an analysis of the transactions that give rise to the issue of checking accounts by one type of bank the commercial bank The other part of the story entails investigating the fundamentals of the operation of the banks that issue currency the Federal Reserve banks

The Federal Reserve Banks

In the United States there are 14 000 commercial banks Commercial banks issue checking accounts but may not issue currency If you want to exchange your checking account for currency you will go to a commercial bank but while commercial banks will give you currency they do not issue currency but instead ordinarily get it from other customers who wish to exchange currency for checking accounts When commercial banks have to give out more currency to their customers than they receive from them they will get additional currency from the Federal Reserve banks

There are twelve Federal Reserve banks all of which issue currency Currency issued by Federal Reserve banks is called Federal Reserve notes Among banks only the Federal Reserve banks are permitted to issue currency The Federal Reserve banks also issue accounts called reserve accounts but these are somewhat different from the checking accounts issued by commercial banks Accounts at Federal Reserve banks are held by commercial banks by the federal government and temporarily (as will be explained later) by individuals and business firms In addition for reasons which do not concern us here accounts issued by Federal Reserve banks are owned by other banks in foreign countries which there perform the same functions as the Federal Reserve banks perform in the United States

The United States (including Puerto Rico and the Virgin Islands) is divided into twelve banking districts each district is served by its own Federal Reserve bank The different districts and Federal Reserve banks are not of equal size or importance New York City is a major American and international financial capital and the Federal Reserve bank of New York accounts by itself for one fourth of the assets of all Federal Reserve banks If to these assets are added the assets of the Federal Reserve banks of Chicago and of San Francisco over half of the assets of the twelve Federal Reserve banks are accounted for[*]

In most important respects the Federal Reserve banks act as a single unit rather than independently and for that reason you often hear references to some action taken by the Federal Reserve System or just simply by the Federal Reserve Technically the twelve Federal Reserve banks are independent in a number of ways the net worth of each is legally owned by the commercial banks it serves and each has its own officers and directors But these officers and directors do not make the most important decisions affecting the actions of the Federal Reserve banks, such decisions are made instead by the Board of Governors of the Federal Reserve System whose members are appointed by the President of the United States, and whose officers are in Washington D C

Thus the Federal Reserve is a unique organization or group of organizations. Their net worth is privately and separately owned but they operate much like government agencies and as a unit. The commercial banks in each Federal Reserve district own the net worth of the respective Federal Reserve banks but receive a fixed rate of return on that investment, the residual share—any profit in excess of the fixed amount paid to the commercial banks—goes to the federal government technically as taxes.

Virtually every independent nation in the world has a 'central bank serving the same purposes as the Federal Reserve banks do in the United States. In some countries the central bank is owned by the government in others it is privately owned But in all countries it operates in what is believed to be the public interest rather than in search of profits. The first was the Bank of England privately owned until it was nationalized under the postwar Labour Party government. Its policies as a government agency are little different from those it followed as a privately owned institution

Commercial banks may become members of the Federal Reserve System (and called member banks) by owning stock in the Federal Reserve bank in their district by owning an account issued by that Federal Reserve bank (a reserve account), and by agreeing to abide by certain rules.

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[*] The other nine Federal Reserve banks in order of their current size are the Federal Reserve banks of Cleveland, Richmond (Va) Philadelphia, Boston, Atlanta, Kansas City St. Louis Dallas, and Minneapolis. All but the Federal Reserve banks of Boston and Philadelphia have branches in other key cities the total number of branches is twenty four

Commercial banks as private corporations, must have charters issued by state governments or by the federal government Those whose charters are issued by the federal government are called national banks and must become members of the Federal Reserve System They are easily spotted by the word national in their corporate names for example The First National City Bank of New York Those with charters issued by state governments are called state banks, and are not subject to federal banking law but may if they wish become members of the Federal Reserve System State banks *do not have the word national in their titles for example* The Chase Manhattan Bank Almost all commercial banks of significant size are members of the Federal Reserve System and own reserve accounts

Reserve Accounts

Reserve accounts serve the same purpose for commercial banks that checking accounts at commercial banks serve for business firms and individuals They are the assets that are most commonly transferred when commercial banks make payments to one another and they are the accounts that are "cashed" when the banks need currency In the last chapter it was noted that when checking accounts are transferred from one bank to another (when you write a check and the recipient deposits that check in his account at another bank) assets must also move from bank to bank. Reserve accounts play an important role in this transfer of assets as will be seen later

Balance sheet (1) shown earlier for All Money Issuing Banks" may now be redrawn to show separately the records of Federal Reserve banks and commercial banks Balance sheet (2) shows that only the Federal Reserve banks issue currency and that only the commercial banks issue checking accounts, and that commercial banks have accounts at the Federal Reserve banks Note that the reserve accounts owned by commercial banks are *assets* of commercial banks and *liabilities* of Federal Reserve banks.

If someone has a checking account and wants currency he cashes" his checking account at a commercial bank. Individuals and businesses do not deal with Federal Reserve banks, they must deal with commercial

MAJOR ACCOUNTS OF ALL MONEY ISSUING BANKS

(in billions of dollars)

ALL FEDERAL RESERVE BANKS

Hold		*Issue*	
Promises	$24	Currency	$25
Gold certificates	21	Reserve accounts owned by commercial banks	20
	$45		$45

(2)

ALL COMMERCIAL BANKS

Hold		*Issue*	
Promises	$80	Checking accounts	
Reserve accounts	20	owned by depositors	$100
	$100		$100

banks The commercial bank whose holdings of currency are thereby reduced can get more currency by cashing its account at the Federal Reserve bank The Federal Reserve *bank issues new currency records an increase* in currency issued and records a reduction in reserve accounts.’

Of course a commercial bank does not have to go to a Federal Reserve bank every time one of its customers wants currency While some customers are cashing their checking accounts others are depositing currency in exchange for increases in their checking accounts Because currency deposits and currency withdrawals do not usually match precisely in any week commercial banks always hold extra currency among their assets

Even when one commercial bank needs more currency it is not usually necessary for the Federal Reserve banks to issue new currency Because of large deposits of currency some banks will accumulate more currency than they wish to hold as assets and this excess currency will ordinarily be traded to another bank for part of a reserve account or the excess currency may simply be deposited with a Federal Reserve bank thereby increasing the commercial bank s reserve account.

As far as the people and business are concerned they may have currency any time they want it if they have a checking account to exchange for it Commercial banks must give currency in exchange for checking accounts on demand To the commercial banks currency is always available from the Federal Reserve if the commercial banks exchange reserve accounts for it To the commercial banks and to the Federal Reserve banks currency and reserve accounts are interchangeable In order to know then where currency comes from you have to know where reserve accounts come from Commercial banks as a whole do not get reserve accounts by giving up currency for accounts instead they get currency by giving up reserve accounts The sources of reserve accounts are discussed later in this chapter

II INTERBANK TRANSFERS OF ASSETS

Suppose you live in and own a business firm located in Middleville You do business with the Middleville Trust Company a commercial bank which is a member of the Federal Reserve System The important accounts of the bank you do business with are

MIDVILLE TRUST COMPANY

Holds		Issues		
Promises	$40 000	Checking accounts		
Reserve account	10 000	owned by customers	$50 000	(3)

Your business firm decides to buy some product to hold as inventory pending sale from a firm in Center City You borrow $5000 from the Midville Trust Company whose records now show

MIDVILLE TRUST COMPANY

Holds		Issues		
Your promise	$ 5 000	Your checking		
Other promises	40 000	account	$ 5 000	
Reserve account	10 000	Other checking		
		accounts	50 000	(4)

The firm from which you want to buy inventory the Center City Supply Company does its banking business with the Center City National Bank whose records are as follows

CENTER CITY NATIONAL BANK

Holds		Issues		
Promises	$80 000	Checking accounts		
Reserve account	20 000	owned by customers	$100 000	(5)

Now you transfer $5000 to the Center City Supply Company in exchange for the product you want You do this simply by writing a check against your account. The Center City Supply Company will take your check to the Center City National Bank and deposit it That bank's liabilities increase because one of its customers checking accounts has increased The Center City National Bank will in turn deposit the check in its account—its reserve account at the Federal Reserve bank Its assets increase by $5000 Its records will now show

CENTER CITY NATIONAL BANK

Holds		Issues		
Promises	$80 000	Checking account		
Reserve account	25 000	owned by		
		Supply Company	$5 000	
		Checking accounts		
		owned by		
		other customers	$100 000	(6)

The check that the Center City National Bank sends to the Federal Reserve will be just one of probably dozens or hundreds of checks on other banks received that day by Center City National and sent by them to the Federal Reserve bank. The Federal Reserve bank will add the amount of all these checks to Center City National's reserve account and sort the checks according to bank. The Federal Reserve bank will then reduce the reserve accounts of the banks against which the checks were drawn.[3]

So the Federal Reserve bank will reduce the reserve account owned by the Midville Trust Company by $5000 and send your check on to that bank. When the bank receives the check from the Federal Reserve it will record a reduction in its reserve account and a reduction in your checking account. Its records will now show

MIDVILLE TRUST COMPANY

Holds		*Issues*		
Your promise	$5 000	Checking accounts		
Other promises	40 000	owned by customers	$50 000	
Reserve account	5 000			(7)

T accounts (6) and (7) show that the Midville Trust Company still holds your promise even though you no longer hold the $5000 checking account at that bank. The intermediation process is complete: someone holds your promise indirectly by holding a checking account *at a bank other than the one that holds your promise.* The two T accounts also show that when the checking account you acquired by borrowing was transferred from you to someone else a liability was shifted from one bank to another and an asset—the reserve account—went right along with the liability.

These transactions could be handled slightly differently—using an account at a commercial bank (a "correspondent bank") instead of the Federal Reserve or using the clearing house if both banks are in the same city. If the two banks are in different Federal Reserve districts more than one Federal Reserve bank will be involved. But in any case the process by which the check is returned by the bank receiving it to the bank at which the check writer has his account will at the same time also bring an automatic transfer of assets from the second bank to the first. The bank receiving the check sends it to the bank against which it is drawn and is, in effect, paid for it by getting some kind of asset, usually a reserve account.

This is not, however, the end of the story for the Midville Trust

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[3] Of course other banks will at the same time be sending to the Federal Reserve checks they have received drawn against accounts at Center City National. Center City National's reserve accounts will increase only if these checks add up to a total amount that is less than the value of checks sent by Center City to the Federal Reserve bank.

Company and the Center City National Bank or for any bank In the example $5000 worth of reserve accounts is transferred to the Center City National from the Midville Trust Company But for several reasons (the most important of which will be discussed in the next chapter) the Midville Trust Company probably will not want its reserve account reduced to such a small amount And the Center City National Bank probably will not want such a large reserve account preferring instead to have a larger part of its assets earning revenue for the bank there being no interest paid on reserve accounts

Thus the assets move automatically from bank to bank when checking accounts are transferred but bankers may face the job of adjusting the *composition* of their assets For this reason as already noted banks hold among their assets such liquid financial instruments as short term government promises and commercial paper

In the present example the Midville Trust Company may decide to sell a government promise in order to increase the amount of its reserve account The Center City National Bank may buy a government promise reducing the amount of its reserve account

III THE CREATION OF RESERVE ACCOUNTS

You have seen that when commercial banks need more currency they simply exchange their reserve accounts for it To the Federal Reserve banks currency and reserve accounts are virtually interchangeable You have also seen that the commercial banks use reserve accounts as a means of transferring assets from bank to bank Reserve accounts are also used as an instrument of Federal Reserve execution of monetary policy as you will see in the next chapter

Where reserve accounts come from then is an important matter The process of tracing the sources of reserve accounts will also account for that small fraction of the money supply issued by the U S Treasury

There are essentially four ways in which reserve accounts come into existence In some cases the issuance of new *money* is a by product of the issuance of new reserve accounts in other cases it is not In *all* cases one single principle applies

Federal Reserve banks are very much like commercial banks Commercial banks when they acquire financial instruments as new assets issue checking accounts to pay for them When all commercial banks together have increases in their assets the amount of checking accounts increases Similarly ***when the Federal Reserve banks acquire assets the reserve accounts owned by commercial banks increase*** The creation of reserve accounts at Federal Reserve banks is essentially identical with the creation of checking accounts at commercial banks A grasp of this single principle will greatly simplify understanding of the reserve account creating process

Another general principle may be noted In the last chapter it was pointed out that when all money issuing banks acquire additional assets, the total amount of money in existence increases This means that if a Federal Reserve bank acquires an asset from someone other than another bank new money will be created, along with new reserve accounts But if a Federal Reserve bank acquires an asset *from a bank,* a reserve account will be created but no new money will be issued, because all money issuing banks will not have increased their assets

Reserve Account Creation A Open-market Operations

Commercial banks acquire promises because they want to earn revenue The issuance of new money by them when they acquire assets is more or less a by product of the commercial banks' businesslike seeking of revenue The commercial banks do not issue new checking accounts because they believe businesses and the people need to have more money

By contrast the Federal Reserve banks acquire promises not because they want to earn revenue but because they want to bring about an increase *in the reserve accounts owned by commercial banks When they want a* reduction in the reserve accounts owned by commercial banks, they will dispose of assets It is up to the Federal Reserve banks to decide the total value of reserve accounts owned by commercial banks

The most important way the Federal Reserve banks control the amount of reserve accounts owned by commercial banks is through the purchase and sale of U S government promises, which are by far the major assets held by Federal Reserve banks

The Federal Reserve does not acquire U S government promises by making loans to the federal government The promises it acquires are not "new' ones, but those already owned by someone else, and they are purchased through bond dealers Federal Reserve purchases (and sales) of government promises are called open market operations, because the securities are purchased in the "open market," rather than directly from the federal government

When a Federal Reserve bank acquires a $1000 government promise through open market purchases, the sellers are given a $1000 check drawn on the Federal Reserve bank In getting this check, the sellers are in effect given temporary accounts at the Federal Reserve bank, they own a $1000 reserve account The reserve account is *new,* it was created when the Federal Reserve bank acquired the government promise

The Federal Reserve bank records the following changes in its records

FEDERAL RESERVE BANK

Holds		Issues		
Government promise	+$1000	Reserve account owned by seller of government promise	+$1000	(8)

When the seller of the promise holds such a check and in effect owns a reserve account he cannot technically be said to be holding money Reserve accounts are not considered to be money because business firms and individuals do not use them for making payments But the seller of the promise can take the check to a commercial bank and deposit it He can exchange a reserve account for a checking account

In that case the seller of the promise will have $1000 more money than before and no one else will have any less money The money he receives is new money a checking account issued by the commercial bank when it acquired a new asset—a $1000 reserve account Records of the Federal Reserve bank and the commercial bank will be changed to show

FEDERAL RESERVE BANK

Holds		Issues	
Government promise (no change from T account 8)	$1000	Reserve account now owned by commercial bank	$1000

COMMERCIAL BANK

Holds		Issues		
Reserve account	+ $1000	Checking account owned by seller of government promise	+ $1000	(9)

Three things may be noted (1) A Federal Reserve bank acquired an asset so reserve accounts held by commercial banks increased (2) A commercial bank acquired a new asset not previously held by any commercial bank—a reserve account so checking accounts increased And (3) putting these two together all money issuing banks together acquired an asset from outside the banking system so the money supply increased A Federal Reserve bank acquired an asset but the increase in the money supply took the form of an increase in account at commercial banks

Open market Sales

If the Federal Reserve wants the reserve accounts owned by commercial banks to decline Federal Reserve banks will sell government promises on the open market

The buyer of the promise will give the Federal Reserve a check drawn on an account at a commercial bank in the same way almost all payments are made The Federal Reserve bank will deduct the amount of the check from the reserve account of the commercial bank at which the buyer has his account and then send the check on to that commercial bank The commercial bank will deduct the amount of the check from the promise buyer s account

As a result of these transactions, the Federal Reserve bank will have $1000 less in assets having disposed of a government promise the commercial bank will have $1000 less in its reserve account and the buyer of the promise will have $1000 less in his checking account Both total reserve accounts and total checking accounts will have declined by $1000

If a Commercial Bank Sells or Buys

When the Federal Reserve buys and sells government promises it does so as noted in the open market Federal Reserve bank officials have no idea *whom* they are buying from or selling to[4] If the Federal Reserve buys a government promise the seller may be a life insurance company a union a little old lady or a commercial bank If the seller is a commercial bank the effect of the transaction is somewhat different

Suppose a $1000 government promise bought by the Federal Reserve is sold by a commercial bank As before the Federal Reserve pays for the promise by giving a check to the seller, this time a bank meaning that the bank will have an increase in its reserve account For the Federal Reserve bank the following changes will be recorded

FEDERAL RESERVE BANK

Holds		*Issues*		
Government promise	+ $1000	Reserve account owned by *commercial bank*	*+ $1000*	*(10)*

And for the commercial bank the following changes will be recorded

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[4] Technically the Federal Reserve buys from and sells to bond dealers exclusively and in that sense knows with whom they are dealing What they do not know is who might at the same time be selling to or buying from a bond dealer

COMMERCIAL BANK

Holds		*Issues*
Government promise	− $1000	(No change at all)
Reserve account	+ $1000	

(11)

An increase in reserve accounts has occurred but there has been no increase in the money supply A Federal Reserve bank acquired a new asset so total reserve accounts increased The commercial bank did not acquire additional assets, *however, as T account (11) shows the commercial bank* simply changed the composition of its assets giving up a government promise and acquiring a reserve account No new money was issued, because all money issuing banks together did not acquire an asset *from outside the banking system*

Similarly, you may show to your own satisfaction that when a Federal Reserve bank sells a promise to a commercial bank, total reserve accounts decline, but the same transaction does not result in a reduction in the money supply

Reserve Account Creation B Borrowing from the Federal Reserve

Open market purchases of government promises are the most important way in which reserve accounts come into existence But there are three other ways in which the reserve accounts owned by commercial banks can increase, all of them involve the acquisition of an asset by the Federal Reserve

When the Federal Reserve buys government promises on the open market the promises it acquires are "second hand" It is not engaged in lending But under some circumstances, the Federal Reserve may acquire brand new promises; it may make a loan The borrower is a commercial bank

When you borrow from a commercial bank you do so because you want money, and you get money—an increase in your checking account When a commercial bank borrows from a Federal Reserve bank, it does so because it wants an increase in its reserve account Ordinarily, it will want the increase only temporarily, and *it borrows from the Federal Reserve* because it finds it cannot quickly get the increase in its reserve account any other way When you borrow from a commercial bank, the checking account money you get is new money When a commercial bank borrows from a Federal Reserve bank, *the reserve* account it gets is also new There is virtually no difference, except in the kind of account involved, between a business's or individual's borrowing from a commercial bank and a commercial bank's borrowing from a Federal Reserve bank

When a commercial bank gets a $1000 'advance' from a Federal Reserve bank the records of the commercial bank and of the Federal Reserve bank show the following changes

FEDERAL RESERVE BANK

Holds	*Issues*
Promise of commercial bank + *$1000*	Reserve account owned by commercial bank +$1000

COMMERCIAL BANK

Holds	*Issues*
Reserve account + $1000	Promise to pay Federal Reserve bank +*$1000*

(12)

Instead of issuing a checking account when it acquired a new asset, the commercial bank issued a promise to the Federal Reserve There is no new money created in these transactions

A Federal Reserve bank did acquire a new asset, so total reserve accounts increased But all money issuing banks together did not acquire an asset from outside the banking system, all the transactions were within the banking system Hence there is no new money created by these transactions

Federal Reserve Notes

It is now a simple matter to digress briefly and explain additions to the supply of currency issued by the Federal Reserve banks When all the commercial banks together find that their customers—individuals and business firms—are withdrawing more currency than they are depositing, the commercial banks can acquire more currency by surrendering their reserve accounts for it

When the Federal Reserve banks issue new currency, called Federal Reserve notes, total reserve accounts owned by commercial banks decline But there is no change in the total assets and total liabilities of Federal Reserve banks One type of liability is replaced by another

The initiative in increasing the supply of currency is actually in the hands of the people and of business firms To signify that they need more currency for the simple hand to hand transactions for which this type of money is usually used, they *simply go to their commercial banks and surrender checking accounts for currency* The commercial banks are thus forced to surrender their reserve accounts to the Federal Reserve banks to acquire currency to restore their depleted supplies

One more note Although public demands for more currency will have the effect of reducing total reserve accounts officials of the Federal Reserve may if they want to increase the reserve accounts owned by commercial banks back to their prior level, simply by buying some government promises The amount of reserve accounts owned by commercial banks is never determined by accident, it is determined by design

Reserve Account Creation C The Role of Gold

The participation of the federal government in the process of money creation involves an exception to the otherwise general principle that the money supply is accounted for by the holdings of promises by money issuing banks Instead of monetizing ' a promise the banking system may monetize' gold or silver Gold is discussed first

The federal government buys gold at a fixed price of $35 per ounce, an amount set by law It is illegal for anyone in the United States to hold gold except for commercial purposes, or as collectors' items or personal jewelry Any American acquiring gold must sell it to the government

Suppose that you dig up a solid gold nugget weighing 100 ounces You take it to the Treasury Department The Treasury Department stores the gold in vaults, some people say ' you dig up gold just so the government can put it back in the ground," that is, in the famous underground vaults of Fort Knox *Gold certificates* are printed by the Treasury, these certificates were at one time used as currency, but today have a specialized use When the Treasury acquires gold, it issues a gold certificate to a Federal Reserve bank in exchange for a reserve account In effect, it "deposits ' the gold certificate in its reserve account The Treasury then gives you the reserve account—a $3500 check drawn on its reserve account, in payment for the 100 ounces of gold

The rest of the transactions are just the same as when the Federal Reserve bank buys a promise on the open market You take the check (the new reserve account you own) to a commercial bank, and "deposit" it, getting a new checking account The commercial bank in acquiring a new asset—a reserve account—will issue you a new checking account The following changes will take place in the records of money issuing banks

FEDERAL RESERVE BANKS

Hold	*Issue*
Gold certificates + $3500	Reserve account owned by commercial bank + $3500

COMMERCIAL BANKS

Hold	*Issue*
Reserve account + $3500	Checking account owned by you + $3500

(13)

notes The already small role played by the federal government in money creation will decline further then and in the future all money except coin will be an account at a bank—a Federal Reserve bank or commercial bank

Coins, the Mint, and the Bureau of Engraving and Printing

Some may wonder what the role of the U S Mint is in all these transactions since mints are ordinarily associated with the making of money The Mint a Bureau of the Treasury Department is responsible for the manufacture of coins just as the Bureau of Engraving and Printing is responsible for the manufacture of paper currency for the Federal Reserve and the Treasury But the process of manufacturing coins and currency must not be confused with the issue of money It takes a financial transaction for money to come into existence and the coins and currency manufactured by the two Treasury Bureaus are not counted as part of the money supply until they come into the possession of some nonbank holder

The transactions involved in the creation of coin money are the same as those described above for gold and silver with the metal purchased being copper steel alloys nickel and silver The only difference is that the monetary value of the coins is greater than the cost of the metal plus the cost of manufacturing the coins (a dime for instance does not contain ten cents worth of silver) Thus there is a profit for the Treasury from coin transactions which becomes part of the revenue of the government similar to tax revenue

The Creation of Money A Summary

In the United States the supply of money increases whenever the money issuing banks acquire a new asset from outside the banking system and pay for the asset by issuing a new account In practice this means the total money supply is equal to and accounted for by

1 Treasury currency—silver certificates and coins—issued by the federal government,

2 Gold held by the U S Treasury and

3 Promises issued by business firms government units and individuals and owned as assets by the Federal Reserve banks and by the commercial banks

Do not be deceived by the foregoing into believing that metals play anything like a major role in the money system A glance at the record of the past few years will tell you as a matter of fact that the money supply has increased during periods in which the amount of gold owned by the Treasury has been declining

In counting the money supply you only count money owned by indi viduals and by business firms other than banks If you take currency to a commercial bank and get a checking account in exchange, only the checking account is counted as part of the money supply, the currency surrendered is not. Similarly silver certificates held by the Federal Reserve are not counted as part of the money supply, only silver certificates held by business and by the people are

The federal government frequently owns accounts at commercial banks These accounts are not counted as part of the money supply, because they are not used for making payments to anyone They are used for collection of taxes and for collecting the proceeds of U S savings bonds sales, the balances are periodically transferred to the U S government's account at the Federal Reserve

Thus you have seen where money comes from in the United States economy In the next chapter you will see how the Federal Reserve determines *how much* money may be created One warning is in order before the next chapter is begun The transactions described in Chapter 9 and in this chapter account for how money comes into existence, and how it is destroyed Nothing in Chapter 11 changes any of the principles described already Do not confuse the transactions that *control* the creation of money with those that actually result in the creation of money itself

11

CONTROL OF THE MONEY SUPPLY

In the United States and most nations of the world, money is a type of account at a financial intermediary But it was not always so Through the greater part of man's civilized life on earth money—what was ordinarily given in exchange for products and services—was a tangible "thing" a physical commodity It often consisted (and in more primitive economies today, consists) of things with consumption uses such as grains, cattle, and shells

Many people still cannot free themselves of the notion that money is, or should be, a commodity, or should be ' backed ' by a commodity This idea has its roots in the story of the evolution of money

I THE EVOLUTION OF MONEY

Money has evolved through four major steps

1 Originally, some kind of commodity was used as money While cattle and other livestock were sometimes used, the best commodities for money purposes were found to be those that were not perishable, were easily portable, and were divisible into small units For these reasons, precious metals were chosen In times of weak social organization, commodity money had the advantage of general acceptability, because it had nonmoney uses

With the use of commodity money, however, the *amount* of money available for trading purposes was not closely linked with the economic need for money With gold used as money, for instance, the amount of money in an economy would depend on how much gold happened to be available Historians generally agree that medieval Europe's economic potential was retarded by a shortage of money, until Spanish explorers discovered New World gold

2 Banking developed from early European goldsmith operations Goldsmiths were among the few who, because of the nature of their work, owned strongboxes to protect valuables People who did not feel safe with large sums of gold money about their homes or persons came to leave their gold with goldsmiths for safekeeping for a fee At this stage in history, banks—that is goldsmiths' places of business—really were places to "deposit' and withdraw" money The phrase, 'put money in the bank," was *accurate then* Today if you *"put money in the bank"* (add to your checking account), you still have the money (a checking account) But early 'depositors" would only have a receipt

In time however, the goldsmiths' receipts for gold began to be used to pay for products and services, that is, the receipts themselves became money The early bankers would promise, on the receipt, to "pay on demand ten pounds of gold"—either to John Jones the depositor, who could then endorse his receipt over to someone else, or, eventually, to 'the bearer" For the first time money was an account The receipts were used, like modern checks or currency, to transfer the ownership of the account

In this case the account was fully 'backed' by gold, that is, anyone holding the account could get gold for it anytime he wanted Such a primitive bank (if dollars had been the monetary unit) could have shown records something like this

GOLDSMITH BANK

Holds		*Issues*		
Gold	$10 000	Receipts used as currency	$10 000	(1)

As before, the amount of money was limited to the amount of precious metals available The use of currency did not increase the amount of money in use

3 Then an interesting development took place Goldsmiths found they could issue more currency than they held gold If someone wanted to borrow, and would pay interest, the new bankers would issue currency to them The pieces of currency, which came to be called banknotes still had printed on them words to the effect that the bank would give gold to the bearer on demand—something the bankers could not actually do if everyone holding the notes were to demand gold But the bankers knew from experience that only a fraction of banknote holders would demand gold in any given day or week

Suppose the bankers felt that they would be safe enough if the amount of gold held were equal to one third of the banknotes issued Such a bank might show records like this

EARLY BANK

Holds		*Issues*		
Promises	$20 000	Banknotes	$30 000	
Gold	$10 000			(2)

The currency was still backed by gold in the sense that for practical purposes anyone who wanted gold in exchange for currency could get it Moreover, the amount of money was still tied to the amount of gold available If all monetary gold were in banks the amount of money would be three times the amount of gold But the actual amount of money would always be less than this theoretical maximum because not all gold would be held by banks

In practice this system had two other drawbacks First, some bankers, such as ran many western and southern banks in pre–Civil War America, were not as cautious as they should have been, issuing too much currency and accepting promises that often turned out to be valueless These banks often failed—not because they did not have gold but because they had bad nontransferable promises Second, because of the weaknesses of individual banks, periods of recession or depression would frequently be a signal for banknote holders to start a "run" on the banks, demanding gold The fact that they could not all be satisfied often led to "financial panic"—a type of economic crisis to be discussed more fully in Chapter 17

With this early type of bank, suppose there were an agency that could require that the banks hold at least enough gold to equal one third (or some other fraction) of the money they issue, and suppose that this agency also controlled all the gold and could supply the banks with gold or take it away at will Such an agency could control the total amount of money in the economy Such a practice comes very close to what is done in the United States today, except that the controlling bank asset has become the reserve account, instead of gold

4 Finally, *modern banking* which has already been described in the last two chapters, evolved Checking accounts have come to take the place of banknotes at commercial banks, and only Federal Reserve banks today issue banknotes (Federal Reserve notes) You cannot demand gold in exchange for your checking account, but you can demand currency, and the commercial banks can surrender their reserve accounts for currency.

The most important difference between the modern money system and the earlier forms, for purposes of this chapter, is that the total amount of money has ceased to be determined by the amount of precious metals—or any other commodity—available There is no link between the amount of gold and the amount of money[1]

What then does determine the size of the money supply if it is no longer either directly or indirectly the amount of gold, silver, or any other commodity? It is determined by regulation by the Federal Reserve Through the operations of the Federal Reserve a limit is set on the amount of money —a limit determined by human judgment, rather than by accident or by tradition Economists say we have a "managed money system"

The Significance of the Size of the Money Supply

The nature of money and its uses implies that money must be relatively scarce as must anything that has economic value This means that there cannot be an endless supply of money, easily and immediately available to all

On the other hand there is probably a certain minimum amount of money required to permit economic activity Money is something you can hold after you have performed services but before you have taken product, and something that is acceptable to you in exchange for your services because you can use it to buy product If there is too little money, it would be difficult for an interdepenent, exchange-oriented economy to function effectively

But the establishment of such broad upper and lower limits to the correct size of the money supply does not help much in determining what exact amount of money an economy should have Even if it is conceded that money should be scarce, but not too scarce, what difference does it make whether the U S money supply today is about $140 billion (as it is), or about $120 billion or $160 billion? No answer can be given to this question at this point Whether the size of the money supply, within wide limits, has much economic significance is today a controversial question Later chapters will examine the controversy

The Federal Reserve System, which acts as money manager for the

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[1] According to law, the Federal Reserve banks must hold gold certificates having a value equal to at least 25 percent of the sum of Federal Reserve notes and reserve accounts issued This link between gold and the money supply is more apparent than real, and is probably retained for the psychological satisfaction of those who still insist money must be 'backed' by something The current gold certificate holdings of the Federal Reserve are well in excess of the requirement. If the Federal Reserve holdings should ever decline close to the required ratio, so that the amount of gold should actually begin to limit the size of the money supply, Congress would probably either reduce the required percentage—e g to 15 percent —or abolish it altogether The last time the Federal Reserve got close to the required amount—during World War II—the percentage was reduced from 40 percent to the present 25 percent. In practice, then, gold has no effect on the size of the American money supply

U S economy operates with the working assumption that the amount of money *does* make a difference At this stage you will examine how the Federal Reserve controls the amount of money but you are asked to withhold judgment on the economic consequences of these controls Later in this chapter you will also see how the Federal Reserve controls other financial relationships in the American economy through direct financial controls

II THE MONEY MANAGERS

As a rule a nation s money managers are its central bank The functions of a central bank will differ somewhat from nation to nation It will ordinarily control the size of the nation s money supply It usually acts as the government s banker as well In some countries it controls the uses of foreign exchange that is foreign money held within the nation s borders In the USSR the central bank has quite a different function acting as a control on execution of the nation s economic plan

In non Communist countries it seems to make little difference whether the central bank is privately or publicly owned In the United States for instance Federal Reserve banks are technically private nonetheless they have been given power to control the quantity of assets that may be owned by commercial banks[2] In turn the Federal Reserve banks are expected to base their policies not on the profits that may be earned by particular policies but on the promotion of economic stability and economic growth

The Board of Governors is the chief administrative group for the Federal Reserve System The seven members of the Board whose officers are in Washington D C are appointed by the President of the United States so this private organization is dominated by government But the members of the board are appointed to terms of fourteen years and cannot serve two terms so the governors are relatively free of current political pressures The history of appointments since the Federal Reserve was founded just before World War I suggests that the appointments are never made as political rewards

The chief official of and major spokesman for the Federal Reserve System is the Chairman of the Board of Governors Another important

[2] The Federal Reserve System demonstrates that the line between public" and "private is not always clear And the Federal Reserve is not unique in this respect. The medical and bar associations which are private have been delegated some control over licensing in their professions. The Farm Bureau Federation, another private association, is so entwined with government that it is difficult in many cases to separate the two the Farm Bureau even receives tax money in some areas. Such relatively newer organizations as the technically private RAND Corporation continue the blurring of the lines between public and private

administrative group, the Federal Open Market Committee, is composed of the presidents of five of the twelve Federal Reserve banks (one of whom is always the president of the Federal Reserve Bank of New York, the most important of the twelve), plus the seven members of the Board of Governors (who hence constitute a majority of the Open Market Committee)

The fact that there are twelve Federal Reserve banks, instead of one with branches, and the fact that authority and responsibility are diffused throughout the banks and among major committees rather than centralized in a few hands must be attributed to compromises made when the Federal Reserve System was established The distrust of centralized authority, always strong in the United States, was stronger in 1913 than it is today The number of banks represents a compromise between those who favored a single central bank and those who wanted a central bank for each state Even the blurring of public and private in the Federal Reserve represents *a compromise between those who wanted a central bank as an arm of* the government and those who simply wanted to charter a large, private bank and give it a monopoly on certain types of business (as was the case, in the nineteenth century with the First and Second Banks of the United States)

*The general terms "Federal Reserve" and "Federal Reserve of*ficials are used in this chapter to give recognition to the fact that responsibility for actions of the Federal Reserve banks is not centered entirely in one officer or group of officers

III HOW THE FEDERAL RESERVE CONTROLS THE AMOUNT OF MONEY

Before examining how the Federal Reserve controls the size of the money supply, it is in order to repeat a warning sounded at the end of Chapter 10 This chapter neither changes nor adds to, the explanation found in Chapters 9 and 10 of the transactions through which money is issued or destroyed

Chapters 9 and 10 described transactions that *bring about* a change in the money supply, in this chapter, transactions will be described that *permit an increase in the money supply, that is, allow money-creating* transactions to take place For instance, Chapter 10 told you that when the Federal Reserve buys government promises from the commercial banks the money suply does not increase, because all money issuing banks together will not have increased their holdings of promises But in this chapter, you will see that *the same transactions may allow the commercial banks to* acquire more promises, when they were previously restrained from doing so, thus this transaction, which does not cause any increase in the money supply may nevertheless frequently be associated with increases in the money supply

In general Federal Reserve officials control the size of the money supply by controlling the amount of checking accounts commercial banks can issue which means that they control the amount of promises commercial banks may accept. The important control device is the reserve account

By law each commercial bank cannot have checking account liabilities that exceed a certain multiple of the size of its reserve account.[3] The multiple may be five in that case a bank with a reserve account worth $20 million could have no more than $100 million in checking account liabilities

The two main powers of the Federal Reserve are

1 The Federal Reserve determines the amount of reserve accounts owned by commercial banks Reserve accounts may be transferred from bank to bank, as explained in Chapter 10 but the *total* amount of reserve accounts owned by *all* banks is fixed by the Federal Reserve

2 The Federal Reserve officials determine the size of the multiple of reserve accounts that checking accounts may not exceed

These and other powers will be examined in more detail

Legal Reserve Requirements and the Multiple

Reserve accounts have already been discussed in Chapter 10 They are accounts issued by Federal Reserve banks and owned by commercial banks, and commercial banks use these accounts in much the same way as the general public uses checking accounts at commercial banks The general public utilizes the services of the commercial banks to transfer the ownership of checking accounts while the commercial banks utilize the services of the Federal Reserve banks to transfer the ownership of reserve

As noted earlier, national banks must become members of the Federal Reserve System and own reserve accounts while state banks may if they choose become members The discussion in this chapter applies only to member banks This qualification brings little loss in generality, however, since over 85 percent of total checking accounts are at member banks[4]

Federal Reserve officials have the responsibility for establishing "reserve requirements" usually expressed as a percentage A 20 percent reserve requirement would mean that each bank s reserve account must be worth at least 20 percent of the value of the bank s checking account liabilities Putting it another way a 20 percent reserve requirement would mean that the checking account liabilities of a commercial bank could not exceed five times the size of its reserve account By setting reserve requirements the Federal Reserve officials establish the maximum multiple that checking accounts may be of the size of the reserve account

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[3] For control purposes the currency held by a commercial bank is considered part of its reserve account. As you have seen before from the point of view of the Federal Reserve reserve accounts and currency issued are interchangeable And from the point of view of the commercial bank, its reserve account and the currency it holds are interchangeable, it can always exchange one for the other

[4] Moreover many of the banks responsible for the remaining 15 percent of the supply of checking accounts are covered by state law which brings their activities substantially into line with the activities of member banks

For instance with a 20 percent reserve requirement a bank whose customers had $100 000 in their checking accounts would have to own a reserve account worth $20 000 Or a bank with $20 000 in reserves could issue no more than $100 000 in checking accounts without acquiring addi*tional reserves* that is *a larger reserve account*

Consider the following bank

COMMERCIAL BANK A

Holds		*Issues*		
Promises	$80 000	Checking accounts owned by customers	$100 000	(3)
Reserve account	$20 000			

With a reserve requirement of 20 percent and hence a maximum multiple of five this bank could accept no more promises without violating the reserve requirement Any promise acquired by Bank A would increase promises and *checking accounts owned by customers*, without changing the figure for reserve accounts A bank such as this one is said to be loaned up A bank that is loaned up and cannot issue new checking accounts cannot increase the supply of money

Notice that there is no reason why this bank cannot permit its customers to increase their accounts by presenting checks drawn on other banks *Assume that customers do present Bank A with $20 000 worth of* checks drawn against accounts at various other commercial banks Checking accounts at Bank A would then increase to $120 000 Bank A would then in turn send these checks to a Federal Reserve bank as described in Chapter 10 and receive a $20 000 increase in its reserve account Its balance sheet would show major accounts in this fashion

COMMERCIAL BANK A

Holds		*Issues*		
Promises	$80 000	Checking accounts owned by customers	$120 000	(4)
Reserve account	40 000			

The requirement is that the reserve account be at least one fifth of the size of total checking accounts Bank A s reserve account is well within this limit and in fact is one third the value of its customers checking ac counts The maximum amount of customers checking accounts would be five times $40 000 or $200 000

At this point then Bank A can even accept new promises Its reserve account must be one fifth of the total assets against which checking accounts are issued as liabilities *so Bank A may expand its ownership of* promises until its checking account liabilities are five times the size of the reserve account—$200 000 This means that the bank may acquire $80 000 worth of promises so that its new balance sheet would look like this

COMMERCIAL BANK A

Holds		*Issues*		
Promises	$160 000	Checking accounts		
Reserve account	40 000	owned by customers	$200 000	(5)

(Of course, any transfer of checking accounts *from* Bank A *to* other banks accompanied by the transfer of reserves, will reduce the total amount of assets that may be held by Bank A by five times the amount of the reserves transferred)

By expanding the ownership of assets Bank A has increased its customers' checking accounts by $80 000 Does this mean that the money supply has increased? The answer is no As Bank A increased its ownership of promises and increased its checking account liabilities other commercial banks were being forced to reduce promises owned and checking acccounts issued by the same amount.

When Bank A sent $20 000 worth of checks to a Federal Reserve bank to increase its reserve account the Federal Reserve bank sent these checks along to the banks against which they were drawn and reduced these other banks' reserve accounts by a total of $20 000 When these other banks' reserve accounts declined their actions had to be exactly the reverse of those of Bank A They were forced to *sell* promises (or otherwise reduce the amount of promises held for example by refusing to renew a ninety-day loan) until they had disposed of $80 000 worth of promises Their balance sheets would show the following changes

ALL OTHER COMMERCIAL BANKS

Hold		*Issue*		
Promises	– $80 000	Checking accounts		
Reserve accounts	– $20 000	owned by customers	– $100 000	(6)

Hence, when all banks are considered together, such transactions *among banks* bring no change in the amount of promises owned, the size of reserve accounts, or the size of customers' checking accounts

There are two points to be made in connection with this example The first is that the effect of legal reserve requirements is to limit the total supply of checking accounts, and not to limit the supply of checking accounts at any given bank As a matter of fact, banks compete for deposits, because increases in checking accounts, as shown, allow them to acquire more promises the ownership of which provides banks with a major part of their income

The second point is this When a commercial bank finds it has more than enough reserves for its current checking account liabilities, as Bank A did when its checking accounts were $120 000 and its reserve account was worth $40 000 (in the parlance of the trade, it has "excess reserves"), it *may* expand its ownership of promises, as Bank A did indeed do, but there is no requirement that it do so if it does not feel that it is wise to do so In most recessions and depressions the commercial banks considered together ordinarily have excess reserves, indicating that under current circumstances they do not want to expand their ownership of promises to the full extent permitted or that businessmen and others do not care to borrow Legal reserve requirements impose a *maximum* on the amount of promises the commercial banks may acquire and hence on the money supply, they do not *determine* the money supply unless banks want to acquire more than the maximum of promises allowable under current reserve requirements

Controlling the Amount of Reserves

Federal Reserve open market purchases and sales of government promises have already been discussed in the preceding chapter It remains only to explore their significance

When the Federal Reserve System buys government promises, *reserve accounts owned by commercial banks increase When the promises are* purchased from those other than commercial banks, the money supply increases as a result When the promises are purchased from commercial banks, the money supply does not increase as a result but instead the commercial banks *merely change the composition of their assets giving* up promises and acquiring additional reserves However, in either case, reserve accounts increase

As long as the required reserve percentage remains unchanged, an increase in reserves permits the banks to acquire more promises. Hence when the Federal Reserve banks buy government promises on the open market the money supply can increase With a legal reserve requirement of 20 percent and a multiple of five, open market purchases of government bonds worth $100 000 will permit an expansion of the supply of money of five times as much, or $500,000 This holds true whether the bonds are purchased from the general public or from the commercial banks, reserves are reserves When the bonds are purchased from the general public the money supply *automatically* increases by $100 000 and an increase of $400 000 more is *permitted* When the bonds are purchased from the commercial banks the money supply does not increase at all as a result of the transactions but an increase in the money supply of $500 000 is *permitted*

Assuming all banks are loaned up so that they have the maximum allowable checking account liabilities with present reserves open market *sales of government promises which will reduce reserves will not only* permit but will force banks to reduce checking account liabilities and by a multiple amount With a legal reserve requirement of 20 percent assuming the banks are loaned up open market sales of $100 000 worth of government promises will force a $500 000 reduction in the money supply

Open market activities are the major regulatory device of the Federal Reserve banks and are highly effective in controlling the size of the money supply with two exceptions

1 The Federal Reserve as noted can only allow and cannot cause an increase in the supply of money If more lending activity by commercial *banks would be a helpful antidote to a recession the Federal Reserve can* supply the necessary conditions for more commercial bank lending and an increase in the supply of money but they cannot force the general public to borrow or force the commercial banks to acquire promises

2 When banks are loaned up the Federal Reserve can easily limit the supply of money through open market activities But when banks have excess reserves open market sales of government promises will—up to a point at least—only reduce the amount of excess reserves and not force commercial banks to reduce their holdings of promises or their checking account liabilities This limitation is not a very great one however because *the times at which the Federal Reserve is trying to limit the supply of* money are usually times of high levels of economic activity when banks are ordinarily loaned up and have no excess reserves

Changes in the Multiple

The foregoing has assumed legal reserve requirements of 20 percent While *20 percent comes close to the actual requirement today (it was chosen* for illustrations because of its simplicity) reserve requirements are not fixed at any given level but are themselves subject to change (within limits set by law) at the discretion of the Board of Governors of the Federal Reserve System

A change in the legal reserve requirement has roughly the same impact on the supply of money as have open market operations It can change the *maximum* supply of money, but will not *determine* the money supply

If reserve requirements are initially 20 percent and are then increased to 25 percent $1 00 of reserves that formerly was sufficient for $5 00 of checking account liabilities would now be sufficient for only $4 00, the money supply would be reduced by 20 percent assuming all banks are loaned up Conversely a reduction in reserve requirements would allow an increase in the supply of money

While changes in reserve requirements must be included among the methods by which Federal Reserve officials legally may limit the money supply the method has never been frequently used and since 1951 has been all but abandoned As an emergency measure during World War II and in the immediate postwar period reserve requirements were gradually raised to record levels Because high reserve requirements had the disadvantage of forcing banks to maintain an unduly large fraction of their assets in a *noninterest earning form this policy has since 1951 been reversed At every opportunity Federal Reserve officials have acted to reduce reserve requirements* Consequently while reserve requirements are changed they are changed in one direction only so that this method is not used as a flexible instrument of monetary policy

The "Discount Window"

As already noted in Chapter 10 commercial banks can acquire more reserves by borrowing from the Federal Reserve banks It was pointed out that borrowing from the Federal Reserve banks cannot increase the money supply since the borrowing bank has as a counterpart to its increased *reserves a new promise issued instead of new checking accounts issued* It should be clear by now however that transactions such as these which do not *cause* an increase in the supply of money may nevertheless *allow* an increase in the supply of money since they permit other money creating transactions to take place It would at first appear that the possibility of borrowing from the Federal Reserve banks would effectively neutralize any money supply limiting activities in which the Federal Reserve might engage but this is *not the case* largely *(1) because the commercial banks do not like* to borrow from the Federal Reserve and as a matter of custom borrow only limited amounts in order to acquire more promises and (2) because the Federal Reserve tends to discourage excessive borrowing on the part of commercial banks

The borrowing privilege instead tends to smooth the difficulties imposed on particular banks when the Federal Reserve banks engage in other regulatory activities or when customers *transfer deposit accounts from one* bank to another For instance when the Federal Reserve banks sell government promises so as to reduce reserves the Federal Reserve officials have no way of knowing which particular banks will be directly and immediately affected The reserves may come quite generally from all banks or sometimes particular *banks will be especially hard hit When a bank loses a* large chunk of its reserve account because its depositors bought government bonds that were being sold by the Federal Reserve banks or because its customers transferred their accounts to other banks it has no practical option but to borrow Sometimes it can borrow reserves from other banks that have excess reserves, but when the Federal Reserve is selling government bonds in order to reduce the supply of money there will be few banks *with excess reserves*, and borrowing will have to be done at the 'discount window"

The expression "discount window" comes from the fact that when the Federal Reserve System was first established it was expected that commercial banks would acquire additional reserves when they needed them by "discounting" a customer's promise that the banks had previously acquired By this practice a commercial bank would in effect sell the customer's promise to the Federal Reserve bank for less than the face value and later buy it back at a higher price If the commercial bank had previously acquired the promise from its customer at a discount the Federal Reserve bank's action would be 'rediscounting" (In a straight loan, a borrower receives a specified sum and promises to repay that sum plus interest at a future date In a discount, a borrower agrees to repay only a specific sum at a future date but he receives a smaller sum when he borrows)

As a matter of practice, commercial banks rarely discount or rediscount their customers' promises Instead they secure an "advance" (a straight loan) and use government securities they own as a pledge of repayment Nevertheless, it is still customary to refer to the interest rate charged by Federal Reserve banks as the "discount rate" and to the act of borrowing from the Federal Reserve banks as 'going to the discount window"

The power to change the discount rate is generally included among the Federal Reserve's tools of monetary control Some people believe that when the discount rate is raised, borrowing from the Federal Reserve will decline, and so will the money supply. Actually, the discount rate is largely symbolic. Commercial banks ordinarily do not borrow unless they positively have to because of sizable losses in reserves, and when they *have* to borrow, the size of the discount rate is of no significance It seems that the Federal Reserve officials use the discount rate largely as a communicative device By raising the rate, they are telling bankers and the business world, "We have decided that the money supply is excessive and future increases in borrowing would be bad"

The effectiveness of a symbolic action is itself always subject to dispute.

"*Moral Suasion*"

If changes in the discount rate are to be regarded as largely symbolic, then explicit communications by the Federal Reserve officials to the banking community so-called moral suasion fall in the same category On several occasions in the past, Federal Reserve officials have tried to convince bank officers to restrict or to increase lending activity, by writing letters to major bankers or by making public pronouncements Attempts at moral suasion are usually greatest when the Federal Reserve is trying to encourage what it cannot force that is, increased lending, or when the Federal Reserve is attempting to limit the money supply, but is handicapped by the existence of excess reserves

In some European countries, where central bankers have to deal with only a half dozen or a dozen large banks, these methods have sometimes been successful But in the United States, where there are 14 000 separate commercial banks attempts at moral suasion have been notably unsucceessful

IV THE INTEREST RATE

As has been noted there is a divergence of opinion on whether the amount of money in the economy (within broad limits) has much significance for the level of economic activity You will also see later that even those who do believe that the amount of money is important do not agree on *why* it is important. But there is general agreement on one point. The amount of money does influence the terms on which financial transactions take place. These terms involve primarily the interest rates that must be paid by those who issue financial instruments.

It can be shown that those activities of the Federal Reserve that *increase* the size of the money supply also tend to reduce interest rates

One important principle behind this effect of monetary policy is that *the market prices of financial instruments and the rate of interest move in opposite directions* That is, if the price of a financial instrument were to rise, its effective rate of interest would fall, and vice versa. Assume that a share of preferred stock is issued and sold at a price of $100 and that the appropriate interest rate at the time is 5 percent, so that the issuing corporation is obliged to pay dividends of $5 00 per year per share. The $5 00 annual payment is fixed, it will neither rise nor fall. The interest *amount* does not change But stock prices and interest rates do change Suppose market activity should raise the price of this stock to $125 The annual payment is still $5 00 per share but $5 00 is only 4 percent of $125 As the price of the financial instrument rises the effective interest rate falls (New financial instruments of course would be issued at the new rate of 4 percent per year) If the price were to fall again to $100 the interest rate would rise again to 5 percent

If monetary policy were to be effective in raising the prices of *financial instruments it would have the effect of reducing interest rates.* It is easy to show that monetary policy does have this effect

First and most obviously when the Federal Reserve banks buy government promises on the open market their attempts to purchase promises have the effect of bidding up the price of government promises Moreover the commercial banks when they get the additional reserves (or when reserve requirements are reduced) also attempt to purchase government promises or other existing assets thereby further bidding up the prices of government and other promises

Higher prices of government promises and their lower effective interest rates should induce other holders of these same instruments to attempt to sell them in order to buy other kinds of financial instruments This process should tend to spread the reduction in interest rates throughout several different types of financial instruments beyond just government promises

You can look at the same process from the point of view of the holders of financial instruments Each kind of financial instrument brings its own kind of reward some pay interest some are highly liquid some allow a measure of control over business firms It would be wrong to think that there are no inducements to hold money and that bonds are always more attractive Each holder of financial instruments tends to balance the benefits *he gets from different types of financial instruments and usually holds* several different types in order to achieve this balance

If the banks are to be able to induce such holders of financial instruments to give up bonds and to hold more money this balance of benefits must be changed Higher bond prices may induce the owner of bonds to sell them lower interest rates also will tend *to make the ownership of bonds* less attractive relative to money The people must be offered higher bond prices to induce them to sell them and hold money

[5] This example is greatly simplified by the choice of preferred stock since shares of preferred stock unlike promises are never due —i e need never be repaid If the illustration were to involve bonds with fixed maturities instead of stock it would not be so easy to determine the appropriate interest rate for each price and yield But the annual return from bonds like preferred stock is fixed in advance and as the price of bonds rises the effective interest rate falls in exactly the same way (although not by as much)

Thus it is that the actions of the Federal Reserve in buying government bonds and lowering reserve requirements actually tend to reduce interest rates There is no controversy over this point, all economists agree that easy money" policies have this effect Not all economists, however, *agree that within a reasonable range of interest rates, changes in interest* rates have much effect on the level of economic activity That controversy must be postponed to Chapter 17

Direct Financial Controls

Actions of the Federal Reserve, then affect the quantity of promises that commercial banks may acquire, the size of the money supply, and the direction of change of interest rates These are all accomplished simultaneously

At various times in the past the Federal Reserve officials have been given powers to control in more direct ways, *particular* types of lending on which conventional monetary controls seem to have little impact

Today, the only such direct controls exercised by the Federal Reserve are on security loans made by brokers Securities are often purchased on the margin," which means that the buyer pays his broker only a down payment and the broker lends the buyer the rest of the price holding the securities themselves as collateral The "margin" is the down payment as a percentage of total price a 10 percent margin would mean that the buyer would have only to put up 10 percent of the purchase price of the security

Margin buying tends to be associated with speculation on the security exchanges If a man expects the price of a particular stock to rise from $100 to $110 within a short time, he will want to buy shares of that stock With a 10 percent margin, he only has to put up $10 per share When (and if) the price of the stock does rise to $110, he may sell having made a 100 percent profit—$10 profit for every $10 he puts up

Speculation is not bad in and of itself Many people feel, however, that excessive speculation, which might result in undue changes in the prices of securities, might influence the level of business activity indirectly, because businessmen may follow the stock market and base business decisions on whether stock prices are rising or falling Hence, the Federal Reserve has *been given the power to set margin requirements* Several times in past years the Federal Reserve has set margin requirements at 100 percent meaning that buyers of securities had to pay cash

There have also been occasions, especially during wartime, when Federal Reserve officials have been given responsibility for designating the minimum *down payment and the maximum period for repayment of loans* made for the purchase of houses, automobiles and household appliances The purpose of such regulations was to prevent the extension of credit from

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CHANGES IN THE LEVEL OF ECONOMIC ACTIVITY

Before World War II the prosperity of industrial societies would periodically be interrupted by a severe depression, throwing millions of persons out of work bankrupting thousands of businesses and, through collapse of part of the financial structure, creating "panic" and wiping out the savings of tens of millions of persons The magnitude of these depressions is not really known in most cases because of the inadequacy of statistical records, especially before 1929 but enough is known to judge these periodic ' crises" as extremely severe and economically unhealthy

To today's student these severe depressions are only history Major declines in the level of economic activity, such as in 1873, 1893, 1907, 1921, 1933 and 1938 seem to be things of the past

But less severe changes in the level of economic activity are not things of the past, since World War II, recessions (as today's more moderate declines are called) of varying intensity—but all still involving idle facilities and millions of unemployed persons—have appeared with the regularity of the past, in 1946 in 1949, in 1953 1957, and 1960 Much more is known now than in the thirties and before about what lies at the root of these declines, and what can be done about them The lessened severity of these declines is a direct consequence of the increase in knowledge (as well as of other factors, especially the relatively new notion that unemployment of anyone tends to be a social responsibility rather than just the responsibility of the unemployed person)

If really severe depressions, such as appeared in the 1930s, seem to be a thing of the past, why is it still important to devote much time and

I SPECIFIC AND GENERAL DECLINE IN THE LEVEL OF ECONOMIC ACTIVITY

Whether you have experienced them or not you know what people mean when they speak of "hard times" Sometimes business is good, other times it is not so good and sometimes it is downright bad Sometimes it is easy to make a sale at other times a buyers' market' obtains. Sometimes work is plentiful other times jobs are next to impossible to find

Macroeconomics the subject of this introductory text cannot explain all cases of hard times and unemployment. Some of these cases are best analyzed in terms of slowness of an internal readjustment process an analysis best framed in terms of microeconomics So it is important at the outset to indicate what kinds of employment problems this chapter and the next one deal with In general the sources of hard times' can be broken into two categories specific (or 'structural) where microeconomics is more appropriate and general (or cyclical), for which macroeconomic analysis is best

Structural Unemployment and Specific Depressions

Sometimes when there is 'bad business' and unemployment only one product one industry or one type of job will be affected Sometimes hard times will come to one or a few isolated regions in the country, a so-called depressed area.

In such cases of limited depression you will seek an explanation in the special factors that apply to the type of product job or region affected Tastes change new types of product are developed and new ways of doing things are introduced Business firms specialize, and when such changes occur some firms may be expected to prosper and others may be expected to experience difficulties When foreign trade expands firms producing for export may thrive while those that face new 'foreign competition' at home may suffer When oil and natural gas become more attractive as house-heating fuels coal becomes less attractive, and the gas and oil industries prosper while the coal industry declines When methods of producing a product are improved so that fewer services are required for each unit of product (the change may be 'automation mechanization or just reorganization) sometimes people will buy more of that product but in other cases as with farm products people do not buy more so some labor may be released and unemployment results

In these cases unemployment and hard times are caused by the *slowness of the adjustment process. People and productive facilities cannot* rapidly change from the production of one good facing foreign competition to another designed for export or from the production of coal to the production of gas and oil Farmers forced out of rural areas cannot instantaneously become skilled urban production workers school teachers or professional men As a result the United States has experienced prolonged agricultural depressions in the midst of prosperity as existed in the 1920s and to a lesser extent in the 1950s Thus also is explained the regional depression in West Virginia predominately a coal mining state *And to some extent such adjustments to change account for the fact that* even in good times there are from 1 million to 3 million persons officially counted as unemployed

Such limited or specific depressions are said to be structural in source giving rise to structural unemployment When structural unemployment affects many parts of the economy at once difficulties may be widespread But ordinarily the weakness in one area will be offset by *strength in another when the coal industry is declining other fuel indus*tries are growing Certainly there are problems that arise from adjustment *to economic change and the problems may be quite serious to those who are* immediately involved But the problems are limited to a particular area or to a particular type of service

The nature of the problem is understandable one industry is declining because another is growing And the nature of the solution is also clear services must be adapted to the kind of product wanted or to new technology The fact that the solution is clear does not necessarily make its achievements easy or prompt There are many barriers and resistances to movements from one area to another and from one type of service to another

Cyclical Unemployment and General Depressions

Nevertheless structural unemployment must be distinguished from the type of unemployment that exists when business is bad everywhere usually called cyclical unemployment When things are bad all over or at least over a wide range of economic activity the weakness in one area is not offset by strength in another there is weakness virtually everywhere

If you could have looked at the difficulties in agriculture in the early 1930s you might have concluded that there was overproduction of farm product and that there were too many farmers The solution you would have said would have been for some farmers to leave the countryside and seek jobs in the cities Agricultural output would then have declined prices of farm product would have risen and the remaining farmers would have become prosperous Such would have been a simple sensible solution—except for one thing there was no place the farmers and farm laborers could go In the early thirties, there were from 8 million to persons but there are also a similar number of unfilled jobs in other areas or in industries requiring higher levels of skills or different skills the problem is apparently one of a delayed adjustment rather than of cyclical unemployment

II EVIDENCE OF A DECLINE IN ECONOMIC ACTIVITY

There is no one set of statistical data called the level of economic activity Changes in the general level are actually combinations of events—increasing unemployment declining total product more business failures fewer hours worked fewer buildings built less savings acquired by the people and so on To get an adequately comprehensive idea about what happens in declines it is necessary to survey data of several kinds

Unemployment and "Full Employment"

What is deemed to be the most important indicator of the general level of economic activity depends on one's point of view as to what is most important If you think the rate of corporate profits is the most important indicator of the health of a private ownership market economy, then you will emphasize that type of data If you think that the rate of business investment—involving as it does, the rate of capital formation for future output—is the most important, you will emphasize that statistical information

Of all the different types of statistical data popular concern is most often—and probably properly so—with employment and unemployment, and since this is so, the level of economic activity is most often interpreted to be a matter of the number of persons employed in relation to those ready, willing, and able to work, that is, in relation to the labor force ' (The term labor force was defined in Chapter 2 as consisting of all those persons ready, willing and able to work, whether or not they have ever been employed)

If full employment is to mean 100 percent employment, so that every single person in the labor force is employed, the United States has never had and never will have full employment Statistics on unemployment have been kept faithfully for over thirty years and estimates have been made for prior periods, only during World War II—when many of the sources of structural unemployment were absent and when many people were actually ' frozen" in their current jobs—did American unemployment fall below one million

Even in the absence of serious localized structural unemployment, there are always many people voluntarily or involuntarily between jobs just entering the labor force from school or military services or seasonally unemployed Construction workers may be temporarily unemployed between projects A steel strike may result in temporary unemployment in the automobile industry and elsewhere There is seasonal unemployment in resort areas and in agriculture A certain amount of unemployment is always to be expected

Just where lies the dividing line between acceptable and unacceptable unemployment is something of an arbitrary matter, or a question of point of view Zero unemployment would hardly be a healthy sign, it probably could exist only in an economic system based on slavery With a labor force of approximately 80 million persons unemployment of perhaps 2 million or 3 million persons—about 3 percent or 4 percent of the labor force—would be considered normal ' Unemployment of 5 percent would begin to become a matter of concern and unemployment of 6 percent would be regarded by many economists as a clear sign of recession Unemployment of 10 percent of the labor force would ordinarily suggest a stronger word—depression

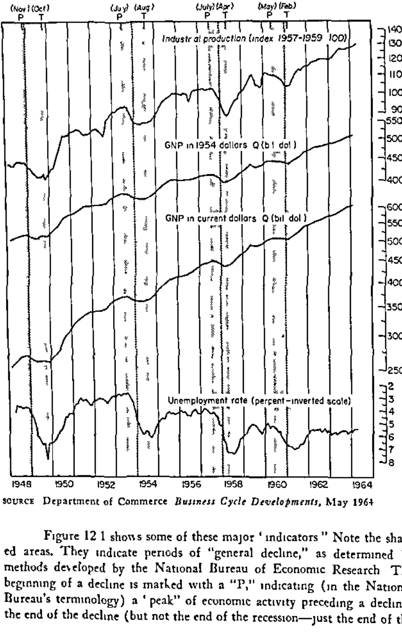
The record of unemployment in the four American recessions since 1948 is shown in Figure 12 1 The more severe recessions—those of 1949 and 1957 1958 were marked by unemployment in excess of 7½ percent of the labor force In the less severe recessions of 1953–1954 and 1960–1961 the maximum unemployment ranged between 6 percent and 7 percent. Note another interesting fact, which is obvious from the chart. The recovery from each succeeding recession was less complete than the last. Unemployment fell below 3 percent in the prosperity of 1953 but did not fall that low again it fell below 4 percent in 1956 and 1957, but that mark has not been crossed since. In fact, since the beginning of the 1957–1958 recession in late 1957 up until the middle of 1964 (where the chart ends), unemployment fell below 5 percent only during one brief month. Some people have gone so far as to suggest that 5 percent unemployment may now be regarded as acceptable,' although few are really satisfied with the figure.

Other Major Indicators

Unemployment is only one of many indications of a decline in the level of economic activity A decline in the level of economic activity—if it is truly cyclical in nature—is characterized by the simultaneous appearances of many individual declines Often the rate of business failure (see Chapter 2) increases, the total product created declines or levels off, sometimes prices fall, the average number of hours worked declines, less new construction is undertaken the rate of new borrowing declines, and many other changes occur, all together adding up to a general decline in the level of economic activity

Figure 12.1

Evidence of a Decline in the Level of Economic Activity, Major Concurrent Indicators 1948–1963



SOURCE Department of Commerce *Business Cycle Developments*, May 1964

Figure 12.1 shows some of these major "indicators." Note the shaded areas. They indicate periods of "general decline," as determined by methods developed by the National Bureau of Economic Research. The beginning of a decline is marked with a "P," indicating (in the National Bureau's terminology) a "peak" of economic activity preceding a decline, the end of the decline (but not the end of the recession—just the end of the

The first chart can be considered a measure of "underemployment," which is quite similar to measured unemployment The standard work week to which employees are now subject is about forty hours, because some people still work standard work weeks of forty four or forty eight hours and because of some overtime work the average number of hours worked per week is a fraction in excess of forty during good times A decline in the average number of hours worked from forty to thirty eight with no increase in employment would be roughly similar (in terms of decline in total product created) to an increase in unemployment of 5 percent But the average number of hours worked ordinarily declines at the same time as unemployment increases thus magnifying the effects on employment of a decline in the level of economic activity Note that the postwar experience has been that the average number of hours worked per week tends to begin declining much earlier than total unemployment begins to rise

Other important indicators that lead the general decline are corporate profits the income share most sensitive by far to cyclical changes, business inventories whose importance is discussed later in this chapter, housing construction which is counted as part of business investment, and new orders (obviously *orders* would decline before *production*) in durable goods industries

The lead indicators are extremely useful in predicting changes in the level of economic activity and are hence an important policy aid But their importance can easily be exaggerated None of them is *always* a lead indicator And in some cases the statistics are not gathered quickly enough to tell officials a recession is coming before it actually has come.

For contrast one important "lag" indicator—which tends to turn up or down *after* the general level of economic activity—is included in Figure 12 2 Note that business expenditures on new plant and equipment especially tend to lag behind the general level of economic activity in turning up and come close to being 'concurrent in turning down This fact is important because it suggests that a decline in business investment—in acquisition of new productive facilities—may often be an element in the initiation of a decline in the level of economic activity, but rarely is an element in the *initiation* of a recovery from a recession

III HOW A DECLINE BEGINS

One part of the theory developed since the early 1930s about changes in the level of economic activity is that a decline begins in one general part of the economy such as one sector, and then spreads throughout the economy—the effect of the decline being ' multiplied in the process of spreading

The analysis of the spreading and ' multiplying ' process is fairly complex and will be postponed to the next chapter The remainder of this chapter will be concerned with the initiation of a decline In this section some general conclusions about the initiation of a decline will be outlined In the last section these general statements will be compared with the post–World War II record of the American economy

The Nature of the Origins—Product Taking Decisions

When people become unemployed there are in principle at least two possible types of explanations Either people cease to be willing to provide labor services and voluntarily quit or temporarily leave their jobs or employers cease to demand their services and release them temporarily or permanently It is reasonable to believe that most unemployment in a period of business decline results from the second of these causes—that people want to be employed and are willing to be employed at the going rates for the kind of work they can do

Hence the conclusion ordinarily is that unemployment results from decisions made by business administrators not to employ people not from decisions made by people not to be employed [1] Indeed a man is not regarded as belonging to the labor force unless he is ready willing and able to work so if a man decides to quit working for a while and does not seek another job he is not even counted as being unemployed

Administrators release employees temporarily or permanently when they do not wish their firm to produce as much product as before The question then becomes Why do administrators decide to cut back on production? Again two explanations are possible The administrators may not want to sell the product or customers may not want to buy the product Only the latter explanation seems plausible It is a reasonable presumption that administrators would employ workers use their productive facilities and turn out product if they believed that the product could be sold at prevailing prices

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[1] The conclusion is not really as easily come by as it seems and indeed these truistic sounding paragraphs contain assertions that were the subject of considerable controversy among economists in the 1930s If administrators in a factory lay off a large number of workers early economists asked could not these workers have regained their jobs simply by reducing the wage they demanded? This question led many early economists to regard much of what we call cyclical unemployment as voluntary unemployment even when the unemployed were laid off or released outright This reasoning led them to suggest that one cure for depression would be a nationwide wage cut. The trouble is that such a policy would cut back on the amount of product the people as a whole attempted to buy and hence not materially affect the amount of unemployment A wage cut policy which seems valid when applied to a particular industry or firm no longer seems reasonable when applied to the entire economy When applied to particular firms or industries this high wage analysis does seem to provide a valid partial explanation of some types of structural unemployment such as in the bituminous coal industry In this chapter cyclical unemployment is regarded as involuntary resulting from decisions made by management

Hence it is that when you attempt to determine why a decline in the level of economic activity begins you focus attention on the willingness of customers to take product rather than on the willingness of administrators to employ workers or the willingness of people to work.

Some False Conclusions

Some people—usually not professional economists but sometimes even members of that heterogeneous group—have accepted the conclusion that employment depends on the willingness of customers to take product, and have used that principle to propose false explanations of the origins of depressions and recessions These explanations will sound crude and ignorant to you if you have absorbed the lessons of the earlier chapters of this text but in charity to those who proposed and believed them you must recognize the simple intuitive appeal of the arguments

Why should the sectors of the economy decide to take less product, thus putting people out of work? One crude argument frequently offered is that there isn't enough income to buy all the product created If there were not enough income, then undesired increases in the inventories of firms would appear and workers would be laid off and these workers having less income would buy less, and so on

This plausible sounding argument is complete nonsense. There can never be insufficient income to take all the product created because income and product are created at the same time and are always equal as you have seen again and again. In fact, herein lies one of the tragedies of recessions and depressions when there is unemployment, people can have more income simply by creating more product they can have more jobs by simply going back to work. Insufficient income can hardly explain insufficient product taking

The same argument is sometimes even more crudely put. Sometimes you will hear it argued that the people don't have enough *money* to take all the product created The people who argue this ordinarily mean income instead of the agreed upon medium of exchange. In the aggregate it is services, and not money that are exchanged for product the role of money is to facilitate this basic exchange. If the banking system is doing its money issuing job adequately and if the Federal Reserve officials are not improperly holding down the money supply there will always be a sufficient amount of money for a full-employment level of economic activity

There is an intuitive appeal in both of these false conclusions A person who is unemployed during a recession may feel that if he had more income (or more money) he would buy more and that if he bought more, someone else would be given a job and would buy more and so on. But in economics there is always a danger involved in reasoning from the part to the whole In the aggregate total product and total income are the same those who are unemployed can get more income by creating more product The problem is to determine why they do not or cannot do so

The Focus Is on Willingness to Take Product

In the initiation of a decline in the level of economic activity the focus of attention is not on the *ability* to take product—not on whether there is enough income or enough money —but on the *willingness* to take product What is involved is product taking decisions made by the four sectors of the economy

For example suppose an economy has a full employment level of total product of $1000 The people (individually and collectively) want to take $900 worth businesses want to keep (invest) $100 worth Everything is fine

Then one day for some reason businesses decide they no longer want any of the product They have as much productive facilities as they want they have as much inventory as they want If they lay off workers in order to cut down output to $900 income and product will both immediately decline to $900 Income and product will still be equal, there will still be enough income to buy all the product But there will be unemployment

If instead, production remains at $1000 worth because the businesses still expect to sell to each other and expect the people to take as much product as is not sold to other businesses the businesses will find that they are left with $100 worth of product Even though they had decided not to keep any of the product, they wind up with $100 worth of increased inventory Income is still equal to product, and there is still enough income to take all the product

But because of the unintended increase in inventory—the 'involuntary investment'—the firms will begin laying off workers and cutting back on output Throughout any ensuing decline income will be equal to product and there will always be enough income to buy all the product

The decline results when businesses decide to take less product Similarly, a decline would result from a decision on the part of the people to take less product—that is an attempt to save more

The general pattern followed by declines in the level of economic activity consists of two steps

1 Someone decides to take, or attempt to take, less product than before with no commensurate increase in the amount of product anyone else is willing to take This initial decision, or group of decisions, initiates

from the rest of the world and the amount of product taken by the rest of the world For instance it was noted above that a decline in net product taken by the rest of the world could result from an increase in product taken from the rest of the world by Americans with no commensurate increase in product taken by the rest of the world But if Americans take more product from the rest of the world foreigners would have more American dollars and even if they decide to keep—as foreign exchange reserves — 10 percent of the newly acquired dollars the other 90 percent would have to be used to take product from America Product taken from America would rise by as much or almost as much as product taken from the rest of the world [2]

II THE PEOPLE AS INDIVIDUALS As you will see the changing willingness of the people to take product does occasionally affect the level of economic activity But generally the people s behavior with respect to the amount of product they decide to take is consistent and regular It follows a fairly predictable pattern to be discussed in the next chapter it appears that the proportion of their income people want to use for taking product and the proportion they want to use to acquire financial savings are not subject to major swings at least when the people as a whole are considered

III THE PEOPLE COLLECTIVELY Prior to and even during the 1930s whenever there was a decline in the level of economic activity and government tax revenues government units more often than not attempted to reduce their expenditures in order to maintain balanced budgets This decline in product taken by the people collectively only added to the magnitude of the decline

Today government units in the United States recognize the significance of their budget policies for the level of economic activity and hence it seems unlikely that they would again act in such a way as to precipitate or aggravate a decline in the level of economic activity In fact the federal government has taken a major responsibility (to be discussed in Chapter 14) for maintaining a high level of economic activity Hence the government seems an unlikely place for the initiation of a recession or depression

Nonetheless government *can* be responsible for unemployment A decline in the product taken by government at the end of World War II—certainly a decline to be expected—had a lot to do with the brief but sharp recession of 1946 And many fear that general disarmament would today endanger the level of economic activity Moreover the chronic unemployment of the late 1950s and early 1960s has been blamed by some on government policy

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[2] Structural unemployment might result from such a change because American purchase of more product from the rest of the world might cut back on the amount of product sold by one set of American firms while the sale of more product to the rest of the world might increase the product sold by another set of firms

But for the periodic appearance of general declines in the level of economic activity you will have to look for an initiator other than the government

IV BUSINESS The record shows that the purchase of product by business is more volatile than that of any other sector The level of investment is deemed to be the most strategic factor in the initiation of a decline in the level of economic activity Three separate but interrelated reasons can be given for this volatility

The first can be best suggested through an example Suppose a firm needs one machine for the production of every 10 000 units of product sold, its investment in machines is obviously related to its sale of product It does not matter whether the firm produces product to be taken by the people, by business, by government or any combination of sectors, since machines are used in the production of all of these If each year its sales *increase* by 10 000 units it will need to buy an additional machine each year, its investment in additional machines does not depend on the *level* of its sales but instead on the *growth* of its sales For instance, if sales should be 180 000 units one year and rise to 200 000 the next an additional two machines will be purchased If in the following year sales rise again by 20 000—an increase of 10 percent—investment will remain at two machines—an increase of zero percent If in the second year sales should increase by only 10 000 instead of 20 000—an increase of but 5 percent—only one machine will be needed A change in sales of plus 5 percent brings a change in investment of minus 50 percent[1] If in the second year sales had instead risen by 30 000—*an increase of 15 percent—three new machines would have been needed* as opposed to two the year before—an *increase* of 50 percent The lesson of this so-called *accelerator effect* is that a small percentage change in final sales will bring a relatively large change in investment

This means that investment will vary more widely than sales of product in general, but it does not necessarily mean that changes in investment will *initiate* a decline in the level of economic activity, since the change in investment is itself the result of changes in sales of product in general (possibly including investment) To understand why changes in investment should initiate recessions, you have to think of the accelerator effect in conjunction with a second explanation for the volatility of investment The amount of investment does not depend only on the growth of the people's willingness to take final product, it depends much more on *forecasts* by businesses concerning what the people will do in the future It is a truism that there are enough productive facilities and inventories *today* to provide the economy with the amount of product being taken *today* but today's investment is largely related to *tomorrow's* sales Being less concrete, expectations tend to be more volatile than sales themselves

Putting these two points together, it can be seen that relatively

As is well known, when we entered World War II the effects of the Great Depression were still with us Indeed in 1940, when Europe was already at war and European orders for product were already increasing American employment, there were still about 8 million unemployed persons in the United States

Our entry into the war precipitated a tremendous demand for military equipment, and in a relatively short time the labor force was fully employed The high level of employment and fears of shortages of consumer goods soon resulted in such great demands that it was necessary to ration some types of product During the war people could not get any or enough *of certain types of products, such as automobiles tires, houses, appliances,* and even girdles, so throughout the war a great backlog of demand for these products developed

At the end of World War II in 1945 many people feared an almost immediate depression because of a sharp reduction in government expenditures There was in fact a brief dip in the latter part of 1945 and in early part of 1946 but the backlog of consumer demand was so strong that the unemployment caused by the shift from the production of war goods to consumer goods was relatively shortlived There was a shift from product taken collectively to product taken individually It was apparent to administrators that more product would be wanted in the future and that more facilities would be needed to provide that product

The increases in product taken by the people and the anticipated further increases provided full employment until about the middle of 1949 By that time the backlog of demand for some types of product (particularly soft goods such as textiles) had been satisfied, and unemployment began to appear in some areas In other areas (for example automobiles, electrical appliances, and housing) the people had not yet been satisfied

In the middle of 1950 the Korean incident began Remembering the experience of World War II, people rushed to buy the kinds of things that had then been in short supply Business administrators, recalling the same experience rushed the production of "hard goods" at an even greater rate They built up inventories so that they would have product to sell for the duration

But the Korean incident was not the start of another world war It was a limited action that did not require military production at a level anything like that required by World War II When households found that "hard goods" would be available to them, they were less interested in buying immediately Unsold inventories began to accumulate in business firms The increase in military production was provided by the increase in the labor force and the increase in productivity, there was little reduction in product taken individually.

After the truce in Korea a rather striking development took place pliances The flurry of buying at the time of the Korean conflict is understandable and so is the immediate post-Korean conflict letdown

But what explains the sharp increase in consumer buying in the latter part of 1954 and 1955? Why did administrators anticipate that the increase in buying would be sustained in the succeeding years so that the increase in their facilities would be warranted? And why did the anticipated increase in consumer buying not materialize? And how do you explain the chronic slack' in the economy appearing in late 1957? Many different answers are given to these questions

The experience of the past twenty years is not, of course, an adequate basis for generalization During that period there were many 'special" conditions But it may be true as some have alleged, that each and every change in the level of economic activity has unique causes and that generalization is impossible

But the pattern of the past twenty years is not really out of line with the expectation that swings in investment, together with periodic wartime booms account for most—but not all—changes in the level of economic activity

And economists have been analyzing changes in the level of economic activity over much longer periods than twenty years The evidence of the last century is even more convincing that historically declines in the level of economic activity—and especially the most severe ones—result from changes in the level of investment, especially those centering around important technical advances

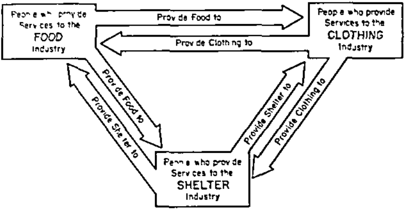
The origin of changes *in the level of economic activity is, however,* only part of the analysis If such changes ordinarily begin with changes in product taking by business firms how is it that recurrent periods of prosperity and decline affect the entire economy? Why is it that when those employed in industries creating productive facilities are laid off and become unemployed those employed in other industries are also laid off? And why is it that when those laid off in industries creating productive facilities are rehired so also will other employees be rehired?

The answer to these questions revolve, as you might suspect by now, around the relationship between the amount the people want to save and the amount businesses want to invest. This savings investment analysis begins in the next chapter

13

SPREADING OF CHANGES IN THE LEVEL OF ECONOMIC ACTIVITY

Figure 13 1


People who provide Services to the FOOD Industry
Provide Food to
People who provide Services to the CLOTHING Industry
Provide Clothing to
Provide Food to
Provide Shelter to
Provide Shelter to
Provide Clothing to
People who provide Services to the SHELTER Industry

set of people that is those who provide services to the food industry do not also provide services to the clothing and shelter industries.

If you worked for the clothing industry, you would be creating clothing but you would not have to take all or even any, of the benefits of your activity in the form of clothing You could take product of value equal to the value of the product you created You probably would take some of each some clothing (but not necessarily the same items you worked on) some food and some shelter In effect you would trade most of the clothing you had created for food and shelter

Product Traded for Product

As is shown in Figure 13 1, each group of people provides product to the other two groups and in return gets the product created by those groups The diagram points up the fact that the *basic* exchange in any economy is not trade between people and production groups but trade *among people* Ultimately you trade your services for the services of others.

Moreover each of these individual trades is an even trade and balances exactly For instance the food taken by the people in the clothing industry is equal in value to the clothing those people provide to the food industry

But even for a simplified economy, something is missing in this picture The economy described uses up all of the product it creates and hence does not increase its capital There is no investment And since this is true there is no saving Add then, a fourth industry called the capital goods industry which produces machines buildings and the like, for the three 'consumer goods industries

You saw that those who supplied services to the clothing industry in effect traded some of the clothing they had created for some food and some shelter and that those in the food and shelter industries similarly traded some of their product to get other products But what can those in the capital goods industry trade for consumer goods? What can they give to the people who provided services in other industries? They can not of course offer the product they have created as can those in the food, clothing and shelter industries because capital goods, by definition are not meant for, and are not wanted by the people

The Creation of Savings—A New View

To answer this question you must recall two points raised in Chapter 7

1 When a firm wants to acquire additional product—to invest—it "pays for' the product by issuing new financial instruments in restricted form—bonds and capital stock for instance—even though the people who provide the services to create the product may not be the same persons who acquire the new stocks and bonds

2 When a firm does decide to invest, the people as a whole do not acquire additional financial instruments—do not save—until the firm actually acquires the product, regardless of when new stocks and/or bonds are printed up and issued

The two points can be combined to bring out a third important point *Those who provide the services that create capital goods are paid in the form of additions to the people's holdings of financial instruments* When those who provide services to the capital goods industry get paid, their pay represents new savings for the people in aggregate They are paid in money, of course, perhaps even "old' money, but when they are paid, the savings of the people as a whole increases The pay *is* new savings To see better why this is so, try a few examples

First, suppose that the clothing industry (any industry would do) wants more productive facilities, to be created by the capital goods industry Firms in the clothing industry issue promises or new shares of net worth

Assume these new financial instruments are sold to the people, who give money for them[1] At this stage, the financial transaction is of the first type, as described in Chapter 7, the financial savings of the people have been changed in form, but not in amount. Where they formerly held money, they now hold another type of financial instrument. Hence even though new promises or shares of net worth are now held by the people, these instruments do not represent new savings

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[1] It would be no different if the people gave money for accounts at financial intermediaries (other than commercial banks), and the financial intermediaries used the money to acquire the promises and stock shares.

The firms in the clothing industry then give the money to the firms in the capital goods industry, which in turn use the money to pay those people who provided services to create the new product At this point the people's financial savings *do* increase, the financial transaction is of the second type The people as a whole have both the stocks and bonds[2] *and* the money The firms in the clothing industry now have the product

Note carefully what has happened When the service providers who created new capital goods were paid, the savings of the people as a whole increased People who create capital goods—whether productive facilities or inventories—are paid with new savings This is true regardless of how the transaction is financed

Suppose that the firms in the clothing industry had issued promises to commercial banks instead of directly to the people The commercial banks would then have issued checking accounts—new money—to the clothing firms But while the firms in the clothing industry still held the new money and the bank held the promise the amount of the financial holdings of the people would be unaffected When this new money had been paid to those who had created the capital goods, the people's savings would have increased The result is the same

A final example is a little trickier Suppose the firms in the clothing industry finance their new productive facilities "out of" undistributed profit In this case, when these firms make the profit in the first place, they acquire *more money as an asset, and the value of net worth increases This is* another financial transaction of the first type the people have less money, but more net worth (in value), so they have changed the form in which they hold their financial instruments Then when the clothing firms actually acquire the productive facilities, and the people who created them are paid, "investment" and "saving" take place simultaneously Once again, those who create capital goods are paid in the form of increases in the people's savings

Trading Savings for Product

Thus an important new principle has been noted those who create capital goods—new product held by businesses—are paid *with new savings* (even though they may be paid with "old" money) This principle also tells us what those who create productive facilities can exchange for food, clothing and shelter They can offer savings That is, since the money they have been paid represents new financial holdings for the people as a whole, when they spend it they are trading new savings for product

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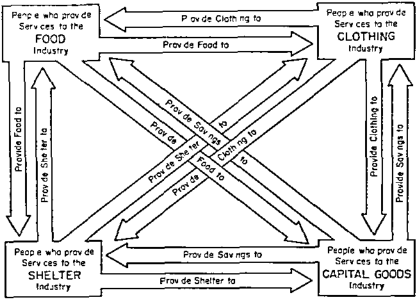
[2] Or accounts at financial intermediaries

Figure 13.2



A person who creates food does not have to take just food, he can take clothing and shelter too And he can save—he can acquire financial instruments To save he must give some of the product he has created to those who created productive facilities And a person who created productive facilities and who gets new savings as pay does not have to take all the benefits of his economic activity in the form of savings He may take food, clothing, and shelter—but he will have to give financial instruments in exchange

Figure 13.2 shows those in the capital goods industry trading savings for food clothing, and shelter The value of savings going to those providing services to the three consumer goods industries must equal the value of the food, clothing and shelter taken by those providing services to the capital goods industry Once again all the trades are even ones

The total amount of savings acquired by all the people is equal, of course to the total amount of capital goods created. And the total amount of product taken by the people plus savings acquired by the people is equal to the total product of all kinds created

Figure 13.2 looks a little complicated, but it really represents a substantial simplification over the actual state of affairs In a real economy there are more than four industries, some people provide services to more than one industry, and, most important, there is substantial overlap between capital-goods industries and consumer-goods industries For instance any one who creates a physical consumer product" actually creates a capital good because that consumer product will be held as inventory by some firm or firms for a finite period of time.

The simplification introduced in the argument it must be emphasized is for expository purposes only The main principles stated are correct and would be shown by a more realistic example. For instance suppose a firm in the food industry decides to increase inventories In this case there is no separate capital goods industry" The food firm supplies its own capital goods. But the food industry must still issue financial instruments in order to hold product, and when those who create the inventory are paid their pay represents new savings for the people as a whole.

Suppose you are a worker who has helped create this inventory of food You will not think of your pay—which will come in the form of money—as new savings" but it will be. When you use some of it to buy some other product, you will not think of the transaction as 'trading savings for product," but that will have been the case.

A completely realistic example then would be considerably more complex but would establish the same principles Sections II and III provide a simpler way of analyzing a realistic economy

A Preview How The Decline Spreads

The preceding discussion is quite important in its own right because it presents another significant way of looking at how an interdependent economy works. Beyond this it suggests why a decline in the level of economic activity once begun in one sector, spreads to other sectors immediately

View the economy from the perspective of the clothing industry That industry produces clothing for all the people—for people in all four industries It does so because people in the other three industries have food shelter and savings to trade for clothing Now suppose that, for some *reason, the rate of investment in the economy declines and less capital* goods are created The immediate result is that those who provide services to the capital goods industry have less new savings to trade for product, including clothing It is not necessary to produce as much clothing as before. There may be layoffs in the clothing industry as a consequence, then those in the clothing industry find themselves unable to take as much food and shelter All industries may be affected

In short, a decline in the level of investment interrupts the important exchange of savings for product, and has the effect of reducing the amount of consumer product created. This spreading' process will be elaborated in section II

This analysis also suggests what some solutions to recession might be One solution might be to create new savings in some other way—by getting the rest of the world to take more net product or by developing deficits in government budgets Solutions are discussed beginning in Chapter 15

Some Other Possibilities

Two other possible effects of a decline in investment must be noted

1 If when investment declines and less savings is offered for product those in the consumer goods industries would buy more from each other and not try to save as much the decline could be confined to the capital goods industry For instance if you worked for the clothing industry and were accustomed to saving 20 percent of your income you might stop trying to save at all and use that percentage to buy food clothing and shelter If everyone in the consumer goods industries did the same the only unemployment would be in the capital goods industry

Unfortunately people do not appear to behave that way As you will see later in the chapter people behave in a fairly regular and consistent manner with respect to their savings propensities Moreover, as you saw in Chapter 8 part of most people's saving is almost obligatory—their life insurance payment, for instance or their mortgage loan payment

2 Early economists went even further They suggested that when there was a decline in the rate of investment there were forces in the economy leading to an automatic *increase* in the creation and taking of consumer product According to this argument there could be no unemployment, no decline in the level of economic activity

Experience showed these "automatic forces" to be illusory Recessions and unemployment have occurred, both frequently and, periodically, severely The modern analysis indicates that when there is a decline in investment there not only is no corresponding increase in the product taken by the people, but there is in fact a reduction

II THE EXTENT OF A DECLINE

Suppose that in a year of full employment in our simple, four industry economy, the value of the product of each industry is as follows

Food industry	$4500
Clothing industry	1500
Shelter industry	3000
Capital goods industry	1000

This breakdown implies that those who provide ownership and labor services to the capital goods industry receive $1000 worth of new savings part of which they keep and most of which they trade for consumer product The savings of the entire economy during the year is worth $1000

Suppose next that the food clothing and shelter industries management and the management of the capital goods industry itself all determine during this year that they want $1000 worth of new capital goods That is why $1000 worth of capital goods are created And also suppose that the people—those providing services to all four industries—want $1000 worth of new savings Of the $10 000 worth of income they receive they want to use $9000 to take consumer product and they want to take the remaining benefits from their economic activity in the form of savings

The situation is an harmonious one Businesses want to invest enough to create $1000 worth of new savings, and the people want to acquire $1000 worth of new savings Under these circumstances full employment will be sustained for there is no tendency to change.

A Decline in Investment

Then in the following year suppose nothing is altered but the expectations of businessmen who decide that they now want to invest less acquiring only $600 worth of new capital goods This implies that through shorter hours layoffs reduced profits and the like payments made to the persons providing services to the capital goods industry will fall to $600 and hence the new savings of the economy will fall to $600 Those providing productive services to the capital goods industry have only $600 worth of savings that they can trade for product—and they will not even trade all of that since they will keep some of the savings[3] Because they trade less savings for consumer product (that is because they buy less) unexpected increases in inventories appear in the food clothing and shelter industries (in the last of these industries an unusually high vacancy rate takes the place of higher inventories)

In order to reduce inventories more workers will be laid off—this time in the consumer goods industries The decline has spread beyond its original source But it does not stop here Because this last group of workers has been laid off they in turn can buy less and further increases in inventories occur The process of decline continues in actual cases until the amount of unemployment resulting from the original reduction in investment has been more than matched by the amount of unemployment created by the spreading of the decline between the amount the people want to save and the amount they can save They will not be able to fulfill their savings plans

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[3] At first blush it may seem extravagant for these people to go on saving when they must scrimp somewhat on consumer product But recall once again that in today s economy much of personal saving consists of obligatory payments.

So when any sector decides to take less product, with no offsetting change in the decisions of any other sectors the people will not be able to save as much as they had planned to save In the previous chapter it was stated that a decline in the level of economic activity will ensue whenever any sector decides to take less product Here the same thing can be stated differently A decline will ensue *whenever the savings actually created are less than the amount the people want to save at the existing level of income* If the sum of business investment government deficits and net product taken by the rest of the world do not satisfy the propensity to save at a full employment level of total income, there will be a recession or depression

The example points up another important principle As we saw the divergence between new savings actually created ($600) and the amount the people wanted to save at full employment ($1000) was only $400, but total income *fell by $2000—by five times as much!* Because total income falls by more than the original divergence between planned and actual savings it is said that there is a *multiplier* process Total income falls by some *multiple* of the original divergence between planned savings and the amount of new savings actually created In the example, the multiplier is five

The reason there is a multiplier process is as already noted, that when the people can acquire less savings than before, they also take less product, because the decline in the amount of savings created disturbs the trading of savings for consumer product

The process works the other way, too If there is an *increase* in investment, so that there is an increase in the amount of new savings created, people in the capital goods industries will have more savings to offer for product. The consumer goods industries will be induced to expand production to satisfy the demand for more product. Total income will increase by some multiple of the original increase in investment.

In summary, then it can be said that for any level of economic activity to be maintained, including a full-employment level, the way total income is divided must satisfy the people's propensity to save and propensity to consume. If the people want to save 10 percent of their income, but investment, government deficits, and net product taken by the rest of the world are only 8 percent of total income, there will be a decline in the level of economic activity And the decline will be by some multiple of the divergence between planned and available savings The issue of full employment and prosperity against unemployment and recession hangs on this financial relationship between the people, as savers, and the other three sectors, as issuers of new financial instruments

Just What Is This "Multiplier"?

It is possible to give a more precise definition of the multiplier But you should not be misled by precision of definition into believing that the economy operates in a simple mechanical fashion As you will see this is far from the truth

Returning to the earlier example there was full employment at a level of total income of $10 000 when the people wanted to save $1000 and business investment of $1000 satisfied this propensity to save Then investment declined by $400 leading the people to cut back on the amount of product taken by $1600 for a total decline in income of $2000 At the lower level of income of $8000 the people s propensity to save was once again satisfied—now by the creation of $600 worth of savings and the decline in the level of economic activity ceased with the economy in a recession

From this information you can infer that the people wanted to divide a *change* in income between reductions in savings and reductions in product taken in a particular way They wanted to cut back on saving by one fifth of the decline in income and to cut back on taking product by four fifths of the decline in income Formally we would say that the people s *marginal propensity to save* is one fifth or 0 2 and that their *marginal propensity to consume* is four fifths or 0 8

Do not confuse the *marginal* propensities to save and consume with the propensities to save and consume discussed earlier The propensity to save is the fraction of their income the people want to save The *marginal* propensity to save is the fraction of a *change* in income by which the people want to *change* the amount they save As you can see they are not the same (However like the propensity to save and the propensity to consume, the marginal propensity to save and the marginal propensity to consume must add together to one or 100 percent

When investment declined by $400 in the hypothetical economy it *can be assumed that those in the capital goods industries (if they were* average people and behaved like everyone else) cut back on the amount of consumer product they bought by four fifths of $400 (since the marginal propensity to consume is 0 8) or by $320 A decline in investment of $400 leads right away then to a decline in consumer product taken of $320

But this will at the same time reduce the income of those in the consumer goods industries by $320 They will reduce the consumer product they take by four fifths of $320 or by $256 The incomes of others will fall therefore by $2 6 and they in turn will take $205 (0 8 x $256) less consumer product The reduction in others incomes of $205 will lead them to take less consumer product reducing still others incomes and so on If you add together the reductions in consumer product taken of $320 $256

$205 and all the other reductions induced (each time four fifths of the preceding reduction) you will come to a total decline in consumer product taken of $1600 This $1600 decline in consumer product taken together with the original $400 decline in investment adds up to a total decline in income of $2000

This is why when the marginal propensity to save is one fifth the multiplier is five Similarly if the marginal propensity to save were one fourth the multiplier would be four if the marginal propensity to save were one third the multiplier would be three The multiplier may always be found by dividing one by the marginal propensity to save that is

$$\text{Multiplier} = \frac{1}{\text{marginal propensity to save}}$$

Thus you can say that the extent of any change in the level of economic activity depends on two things as was noted at the end of the last section But now you can define what those two things are with a little more precision

1 It depends on the amount of the original divergence between the amount the people want to save and the amount they can save in this example still $400

2 And it depends on the way the people want to divide a particular change in income between changes in product taken and changes in savings, that is it depends on the multiplier In the example with a marginal propensity to save of one fifth the multiplier is five

A Closer Look at the Multiplier

A decline in the level of economic activity can be thought of as consisting of two parts There is first an original decline which can occur in any sector but which most often occurs in business investment And there is a secondary or induced decline which is the result of the original decline and which consists only of a decline in product taken by the people The existence of the secondary decline is the reason there is said to be a multiplier effect

Some things are known about the actual multiplier in the United States there is controversy about other things, and there are areas of ignorance about certain aspects These things can be said

1 While the propensity to save and the propensity to consume tend to change as income changes the *marginal* propensity to save and the marginal propensity to consume do not change very much over short periods of time as income changes Hence it is reasonable to regard the multiplier as being fairly constant as income changes in a recession or in recovery

2. *However, the multiplier may vary as certain other things vary.* For instance, in the above example it was assumed that those who provided services to the capital goods industry had the same marginal propensity to save as the people as a whole, but they might not. The multiplier may vary depending on where the original decline (or increase) takes place. Secondly, in the above example, total income and "savings" were regarded as more or less homogeneous categories, and hence the example was oversimplified. Are the people's desires to save satisfied to the same extent regardless of whether firms finance investment by (1) issuing promises to commercial banks, thus providing the people with more money, (2) issuing promises in the form of bonds directly to the people, or (3) using undistributed profits and thereby increasing the book value of the shares of net worth already held by the people? It would seem likely that the method of financing might make some difference, but whether it does, and if so how much and what kind of difference it makes, is not known.

3. On the basis of historical evidence, it is possible to say that the American multiplier has a value lying somewhere between 2 and 3¼. You can be reasonably certain, then, that any decline in investment will be more than equally matched by a decline in consumer product taken.

Questions might also be raised about the timing of a decline in the level of economic activity. In the example there was an original decline in investment of $400, followed by a decline in product taken by the people of $320, followed by another decline in consumer product taken of $256, and another of $205, and so on. The example would lead you to believe that a decline in the level of economic activity occurs in a series of "steps." *But economic processes are continuous, and there are no such "steps."* What then is the *actual* timing of a decline in the level of economic activity?

All that can be said is that each case is different. With most recessions there will not be a single, isolated, "initial" decline in investment. The so-called initial decline may really be many smaller declines spread over a period of months.

How long will it take after any initial decline in investment before the people begin to reduce the amount of product they take? Once again there is no single answer. The people may actually begin to reduce the amount of product they take *before* businesses reduce their rate of investment, if workers and owners know the decline in investment is coming.

How long will the whole process take? Again, no answer. It depends *on how quickly people are forced to cut back on the amount of product* they can take (for a while after being laid off, for instance, some workers can dip into their savings), on when their bills fall due, and so on. Experience indicates, however, that the major effects of a decline in investment are felt *throughout the economy extremely quickly, and that most of the reduction* in product taken by the people happens almost simultaneously with the reduction in investment.

the three other sectors as a whole and hence all four sectors are always involved It is the divergence between the amount the people want to save at a full employment level of economic activity and the savings actually provided by net business investment net deficits (plus or minus) of government units and net product (plus or minus) taken by the rest of the world that actually initiates the decline

The Spreading of the Decline

The decline spreads beyond the initial sector because the people as a whole—while they do not decide how much they *can* save—do decide how they will divide their incomes between consumer product taken and new savings acquired A decline in the amount of savings provided will induce the people to take less product

The extent of any decline depends on how the people in the aggregate react to a decline in their ability to save the extent of the decline depends that is on how much the people reduce the amount of product they take when the amount of savings provided to them is reduced The people's reactions are formalized in the concepts of the marginal propensity to save the marginal propensity to consume and the multiplier

If you know the marginal propensity to save you can divide that fraction into one and thereby compute the multiplier If you know the original divergence between planned and actual savings you can multiply this divergence by the multiplier to determine the extent of the decline

Two Important Conclusions

Two important principles can be inferred from this theory of change in the level of economic activity Both principles stand in contrast with the theory as it existed in the early 1930s and before

First you have seen that the decisions on the part of the people concerning how much they want to save are not related at least in any direct or obvious way to the decisions on the part of business government *and the rest of the world concerning how much new savings these latter* will create

By contrast the conclusion of earlier theory was that the people's desires to save would always be satisfied If the people wanted to save more there would be *automatic forces leading businesses to invest more* if the people wanted to take more product there would be automatic forces leading businesses to invest less Similarly in the older theory if businesses wanted to invest more the people would be led to save more and so on

It would be nice if such relationships actually existed It would mean that there would be no recessions or depressions or at least that if reces less Or the reduction in consumer product taken may lead businesses to believe that *even in the present* they hold too much product—especially inventories If there is such a secondary decline in investment it will lead —as the original $400 decline in investment led—to declines in product taken by the people That is there will be a multiplier effect once again

The possibility that a decline in the level of income may in turn lead to a decline in investment makes it all the more difficult to predict how great a decline will result from any given divergence between planned and actual savings It also creates a possible paradox —the word is inside quotation marks because the paradox is more apparent than real

Suppose there is full employment and a high level of economic activity implying that the volume of new savings being created is enough to satisfy the full employment level propensity to save Then the people decide to (try to) save more that is the propensity to save increases and the propensity to consume declines

With this change the volume of new savings being created will no longer be sufficient to satisfy the people's savings plans As you now know the result will be a decline in the level of economic activity—a decline equal to some multiple of the original planned reduction in product taken by the people

Businessmen may react to this decline in product taken by the people by cutting back on planned inventories reducing construction and expansion plans and the like thus decreasing investment by some amount This decrease in investment will reduce the savings created for the people to hold and will even further reduce total income

Note the seeming paradox The people decided to try to save more As a result the level of economic activity declines and the people ***actually save less***

The fact that attempts by the people to save more may lower the level of economic activity—and total saving—led some overzealous economists of the late 1930s to suggest that thrift was probably a harmful thing in an advanced economy These economists labeled this seeming paradox as the paradox of thrift and advanced programs for discouraging attempts to save The judgment of these economists as is now known was premature As you will see in later chapters instability can also result from a propensity to save that is too *low* relative to the rate of creation of new financial instruments

It is probably best in a free society to leave to the people the determination of the amount they want to save Moreover it now seems completely unnecessary to attempt to influence the propensity to save since governments today have powerful tools with which to control the rate of creation of new financial instruments as you will see in Chapter 15

This seeming paradox rather than implying that thrift is harm ful, shows how important it is, when attempting an analysis of the forces affecting the level of economic activity, to distinguish between the *actual* savings created during any period of time and the amount that people *want* to save at existing levels of economic activity The two are not the same In fact, an increase in actual savings created and acquired by the people is associated with an increase in the product taken by the people as well as an increase in their savings, but an increase in the amount the people want to save may be associated with a decline in both product taken by the people and in savings acquired by the people

IV THE CONDITIONS REQUIRED FOR SUSTAINED PROSPERITY

The foregoing analysis, which is intended to explain increases or declines in the level of economic activity, also provides a basis for stating conditions necessary for sustained prosperity

Even without any complex analysis the general requirement for prosperity should be clear The total product taken individually collectively and by the rest of the world plus the product wanted by business firms as new productive facilities and as increases in inventories, must be sufficient to employ the entire labor force with an allowance for 2 percent to 4 percent of the labor force being between jobs, or otherwise unemployed

The total product must increase every year in order to provide for full employment This is necessary because, as you saw in Chapter 12, there are annual increases in the labor force and in productivity

In addition, primary reliance is upon business to provide the people with the amount of savings that will satisfy the propensity to save at full-employment levels of economic activity If government units issue financial instruments because of budget deficits, or if the rest of the world issues financial instruments because it takes net product from the United States, the required level of business investment will be less If governments have surplus budgets, and/or if the United States takes net product from the rest of the world, the necessary rate of business investment will be greater If the rate of creation of financial instruments falls below the amount the people want to save at full employment, there will be a recession

Since business firms build productive facilities on the faith, hope, or carefully made prediction that more product will be taken from them in the future, another condition of sustained prosperity is that administrators believe that the product taken in the future will be sufficient to warrant business investment at the rate required to satisfy the people's propensity to save at full employment

This statement of conditions required for sustained prosperity should show how fragile the economy's stability may be at full employment If the product taken by the people does not conform to the expectations of business administrators (or if the people become more interested in saving than the administrators had anticipated), unemployment will develop and spread But unemployment will also develop if the people do plan to take more product but businessmen believe that they will not

Administrators decide to expand facilities on the basis of an anticipated demand greater in the future than today, not on the basis of today's demand for product It is self evident that they have, at the very least, enough facilities to produce the product that is currently being taken Unless they can see a future of rising demand they will not build facilities today When administrators view future sales prospects dimly and reduce investment it does not matter whether their estimates were right or wrong, the people *will* take less product, unless government policy prevents the decline that the reduction in investment would otherwise initiate

A Final Word Savings and Debt

The analysis of this chapter allows a direct assault on a common area of confusion There is a widespread notion that debt—what you "get into" when you issue new financial instruments—is associated with bad times" instead of 'good times" This is a serious error, for it is the very opposite of the truth

Such thinking undoubtedly derives from the fact that many individuals will not borrow unless there is some emergency, as, for instance when a job is suddenly lost or when there are unexpected medical expenses Some debt may in this manner, actually be associated with hardship But *of the total indebtedness of the economy—well over $1 trillion*[4]*—very* little can be associated with hardship

Some of this trillion dollars of indebtedness is to be associated with the 'public debt, that is the indebtedness incurred by the federal (not state or local) government when it operates with a deficit budget But the greater part of our total indebtedness represents the acquisition of facilities of various sorts parks, courthouses and schools acquired by state and local governments, plants machines, and inventories acquired by business firms, *and new residences* acquired *by home buyers* What is classified as "consumer debt constitutes only about 5 percent of total indebtedness and most of it is incurred upon the purchase of new automobiles and appliances Thus the greater part of debt must be associated with increases in the

[4] Total value of promises issued by American businesses individuals and government units but not including net worth type financial instruments issued which would if included raise the total to about $1 5 trillion

TABLE 13 1

NET PUBLIC AND PRIVATE DEBT 1929–1963

(billions of dollars)

End of year[1]	Total	Federal Government and agency	State and local government[2]	Private									
				Total	Corporate			Individual and noncorporate					
					Total	Long term	Short term	Total	Farm[3]	Nonfarm			
										Total	Mortgage	Commercial and financial[4]	Consumer
1929	190.9	16.5	13.2	161.2	88.9	47.3	41.6	72.3	12.2	60.1	31.2	22.4	6.4
1930	191.0	16.5	14.1	160.4	89.3	51.1	38.2	71.1	11.8	59.3	32.0	21.6	5.8
1931	181.9	18.5	15.5	147.9	83.5	50.3	33.2	64.4	11.1	53.3	30.9	17.6	4.8
1932	174.6	21.3	16.6	136.7	80.0	49.2	30.8	56.7	10.1	46.6	29.0	14.0	3.6
1933	168.5	24.3	16.7	127.5	76.9	47.9	29.1	50.6	9.1	41.5	26.3	11.7	3.5
1934	171.4	30.4	15.9	125.1	75.5	44.6	30.9	49.6	8.9	40.6	25.5	11.2	3.9
1935	174.7	34.4	16.0	124.2	74.8	43.6	31.2	49.4	9.1	40.5	24.8	10.6	4.9
1936	180.3	37.7	16.2	126.4	76.1	42.5	33.5	50.3	8.6	41.7	24.4	11.2	6.1
1937	182.0	39.2	16.1	126.7	75.8	43.5	32.3	50.9	8.6	42.3	24.3	11.3	6.7
1938	179.6	40.5	16.0	123.1	73.3	44.8	28.4	49.8	9.0	40.9	24.5	10.1	6.3
1939	183.2	42.6	16.3	124.3	73.5	44.4	29.2	50.8	8.8	42.0	25.0	9.8	7.2
1940	189.9	44.8	16.5	128.6	75.6	43.7	31.9	53.0	9.1	43.9	26.1	9.5	8.3
1941	211.6	56.3	16.3	139.0	83.4	43.6	39.8	55.6	9.3	46.3	27.1	10.0	9.2
1942	258.6	101.7	15.8	141.5	91.6	42.7	49.0	49.9	9.0	40.9	26.8	8.1	6.0
1943	313.6	154.4	14.9	144.3	95.5	41.0	54.5	48.8	8.2	40.5	26.1	9.5	4.9
1944	370.8	211.9	14.1	144.8	94.1	39.8	54.3	50.7	7.7	42.9	26.0	11.6	5.1
1945	406.3	252.7	13.7	139.9	85.3	38.3	47.0	54.6	7.3	47.4	27.0	14.7	5.7
1946	397.4	229.7	13.6	154.1	93.5	41.3	52.2	60.6	7.6	53.0	32.5	12.1	8.4
1947	417.4	223.3	14.4	179.7	108.9	46.1	62.8	70.8	8.6	62.3	38.8	11.9	11.6
1948	433.6	216.5	16.2	200.9	117.8	52.5	65.3	83.1	10.8	72.4	45.1	12.9	14.4
1949	448.4	218.6	18.1	211.7	118.0	56.5	61.5	93.7	12.0	81.8	50.6	13.9	17.3
1950	490.3	218.7	20.7	250.9	142.1	60.1	81.9	108.8	12.3	96.6	59.4	15.8	21.4
1951	524.0	218.5	23.3	282.2	162.5	66.6	95.9	119.7	13.6	106.2	67.4	16.2	22.6
1952	555.2	222.9	25.8	306.5	171.0	73.3	97.7	135.5	15.2	120.4	75.2	17.8	27.4
1953	586.5	228.1	28.6	329.8	179.5	78.3	101.2	150.3	16.9	133.6	83.6	18.4	31.4
1954	612.0	230.2	33.4	348.4	182.8	82.9	100.0	165.6	17.6	147.9	94.6	20.8	32.5
1955	672.3	231.5	38.4	402.5	212.1	90.0	122.2	190.4	18.8	171.6	108.7	24.0	38.9
1956	707.5	225.4	42.7	439.4	231.7	100.1	131.7	207.7	19.5	188.2	121.3	24.4	42.5
1957	738.9	224.4	46.7	467.8	246.7	112.1	134.6	221.1	20.3	200.8	131.6	24.3	44.8
1958	782.6	232.7	50.9	499.1	259.5	121.2	138.4	239.6	23.3	216.2	144.6	26.5	45.1
1959	846.2	243.2	55.6	547.4	283.3	129.3	154.0	264.1	23.0	241.1	160.8	28.7	51.5
1960	889.4	241.0	60.0	598.4	301.7	139.1	162.7	286.6	25.3	261.3	174.5	30.8	56.0
1961	944.1	248.1	65.0	631.0	321.5	149.1	172.4	309.5	27.8	281.7	190.1	33.9	57.7
1962	1 017.3	255.9	73.7	687.6	346.0	161.2	184.8	341.7	30.5	311.2	210.9	36.8	63.5
1963[5]	1 095.9	260.9	82.1	752.9	371.6	175.5	196.1	381.3	32.8	348.5	237.6	41.1	69.8

[1] Net public and private debt outstanding is a comprehensive aggregate of the indebtedness of borrowers after elimination of certain types of duplicating governmental and corporate debt. For a further explanation of the concept, see *Survey of Current Business* October 1950

[2] Data for State and local government debt are for June 30

[3] Farm mortgages and farm production loans. Farmers financial and consumer debt is included in the nonfarm categories

[4] Financial debt is debt owed to banks for purchasing or carrying securities customers debt to brokers and debt owed to life insurance companies by policyholders.

[5] Preliminary estimates.

SOURCE Council of Economic Advisers *Annual Report* 1964 which drew data from Commerce Department Treasury Department Board of Governors of the Federal Reserve System and Federal Home Loan Bank Board nation's capital—whether business capital goods, public (government) capital, or individual personal capital Such capital acquisitions do not reflect "hardship"

Those who mistakenly associate debt with hardship often compound the confusion by suggesting that while increases in total indebtedness are 'bad," increases in the savings of the people are "good" These people think of the nation as a family and follow the old Puritanical wisdom that debt for a family is a sign of moral weakness, while thrift is a sign of character While these people, you, and anyone else may be permitted to judge personal character by any yardstick they choose, they are not to be permitted to confuse a family with a nation

For present purposes, the main difference between a family and a nation is that the former, when it saves, acquires financial instruments *from others, and when it borrows, borrows from others; but for a nation,* especially for the United States, borrowing and saving reflect *internal* relationships This means that, in the United States, total savings *cannot* go up unless total indebtedness also goes up The analysis of this chapter, and of those preceding should show that if savings is to increase, so must indebtedness, for it is the creation of financial instruments—mostly borrowing—that provides savings for the people to acquire If there is to be prosperity, savings must increase, and so must total indebtedness

Some individual firms, government units, and house buyers may reduce their debts but—to maintain prosperity—other business firms, government units, and house buyers must increase theirs by a greater amount *Without an ever-increasing indebtedness for the whole economy, it will* be impossible for people to acquire enough savings to satisfy their full employment propensity to save

The historical record bears this out Debt is clearly associated with good times, rather than bad Total indebtedness always increases, during recessions the increase has slowed down, and during periods of prosperity, the increase has speeded up The only time in the last forty years in which the total indebtedness of the American economy has actually declined has been in the blackest days of the Great Depression

Of all the trillion dollars of the American total indebtedness, no part is more controversial, nor, it seems, more misunderstood, than the 30 *percent or so issued by the federal government, called the public debt* The public debt, being the part of total indebtedness most directly under government control, has an extremely important role to play in federal stabilization policy It is to that role, and to the public debt itself, that the discussion will turn in Chapters 15 and 16 The next chapter, however, reviews the major theme of this book so far—macroeconomic relationships—before turning to the important question of policy

14

MACROECONOMIC RELATIONSHIPS IN PERSPECTIVE

In the first thirteen chapters of this volume, you have been introduced to the structure of the American economy, from the aggregate or ' macroeconomic" standpoint, and have been shown one of the major sources of potential instability in this or any other highly organized, interdependent, industrial society In the next chapter, and in most of the remaining chapters, attention is turned to the problems of formulating and executing government economic policy, especially that policy concerned with the instability problem

This chapter stands as a breathing point Its purpose is to summarize and bring together the fundamentals of macroeconomic relationships as set forth in the earlier chapters, and to anticipate on the basis of the same analysis what is to come in the later chapters

By now it seems clear that the major analytical problem concerns the relationships among the four sectors of the economy, and especially the financial relations between the people on the one hand and the other three sectors, as issuers of financial instruments for the people to hold, on the other This chapter concentrates on that relationship

I THE FRAMEWORK

The broad, general analytic framework set forth in the early chapters does not apply to all economies, but it applies to a broad range of economies, not only that of the contemporary United States

In general, it applies to any economy in which

1. What a person is paid is equal to the value of the product he

creates, so that the value of any product is determined to be equal to the value of the services employed in creating it

2 Providers of ownership service are paid for their services an amount deemed equal to their contribution to the creation of product Ordinarily, this requirement involves private property

3 Owners of net worth receive the ' residual ' share—profit or loss —equal to the value of the product created minus the payment made to others on the basis of prior arrangements

Such a set of rules implies an economy that operates as described in the following pages of this section

Creation and Destruction of Claims

Production is organized, implicitly or explicitly, into production groups which consist of all types of organizations to which people provide services and from which people take product, including groups with *privately held net worth (businesses whether proprietorships, partnerships,* or corporations), groups with net worth held in trust (churches, private schools and 'mutual' financial institutions), and groups with net worth held (ordinarily with no stated value) in common (government units)

Productive services are provided only by the people Hence if people go to a production group and create a product worth $20 000 (as determined by selling the product for $20 000), these people have a claim to the product, or to $20,000 worth of other product As shown in the following T account the creation of product itself results in the creation of claims held by the people

PRODUCTION GROUP		*THE PEOPLE*		
Holds	*Issues*	*Hold*		
Product $20 000	Claims $20 000	Claims $20 000		(1)

Three points may be recalled in connection with this reasoning

1 Claims are created at the same time the product is created, not at some later time In the first instance, the claims will probably consist of obligations to pay money to those who provided services Later, the people may be paid in money, which will constitute a claim to product in general but the production group will still have a specific claim against it, perhaps in the form of a promise issued to someone

2 The value of the product created by a production group will not be (necessarily) equal to its total sales but will instead be equal to its total sales minus its total purchases of ingredients and other product created by other production groups The value of the product created by a firm is equal to the *value added* by it to some product bought by it

3 As T account (1) shows, the *only* way a production group may become entitled to hold product is to issue some kind of claim *to the people* (although, as you know, the people may not hold the very same instrument issued by the group, since there may be for example, financial intermediation) This is so because firms do not create product and hence have no claim to product, only people create product—and only, then by making arrangements with people can firms hold product[1]

At this stage you are concerned with people in the aggregate not with individuals or particular groups of people The people as a whole contribute services and create product worth $20 000 and hence $20 000 worth of claims are created and issued to the people as a whole When the people take the product, the claims disappear The product is wiped from the record, since it is assumed to be consumed All the figures in T account (1) become zeroes

Similarly when people go to production groups and create product of all kinds claims are allocated to them equal to the value of the product created Each person who contributed services to create product has a claim to product of *equal value* to the product he has created He does not have to take the same product he has created When the people as a whole take all the product created, all the product is wiped from the record and all the claims are destroyed

Product Not Taken by the People

But under ordinary circumstances, the people do not take all the product they have created, because they do not want to They want to keep some claims And under ordinary circumstances, production groups as a whole do not want to surrender all the product to the people They want to keep some product, either as inventory of ingredients, partly finished product, finished product, or productive facilities In this case, some of the claims are not used by the people and are not destroyed, and some of the product is kept by business and not wiped from the record

Thus far, ignoring the influences of government and the rest of the world, the claims held by the people are always equal in value to the product held by production groups Indeed it is the fact that the people hold claims that permits production groups to hold product, and it is the fact that production groups hold product that permits the people to hold claims

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[1] Actually, any business firm could hold *any* asset—not only product—only by making some kind of arrangement, by issuing some kind of claim The entire 'right side' of a firm s balance sheet—liabilities and net worth—must be considered as a set of arrangements that permits firms to hold assets Here we are concerned only with the firm s ability to hold product and it is worth noting that the claims issued by firms *and held by the people* will be equal to the amount of product held by firms

Some Definitions

The analysis thus far gives rise to some common concepts which it would be well to identify at this point.

When product is created and kept by production groups there is said to be "investment" (or "real investment") for the economy as a whole. *Investment* during any period of time (for example, for a year) will be equal to the value of the product added to the assets of production groups.[2] When claims are created and kept by the people, there is said to be "saving" (or "financial saving") for the economy as a whole. *Savings* during any period of time (for example, for a year) will be equal to the increase in the value of claims held by the people. Ignoring the effects of government and the rest of the world, saving and investment during *any* period of time must be equal.

The total product of the economy during any period of time (such as a year's net national product) will be equal to the total product created in production groups during that period of time, whether it is taken by the people or kept by businesses. The *total income* of the economy will be the total income of the people. It may be looked at either as the sum of (1) the product taken by the people during that year and (2) the increase in the value of claims held by the people during that year (that is, product taken plus savings acquired), or it may be looked at as the total value of claims created and issued to the people during that year, whether kept by the people or not. These two are of course the same, because the claims issued to the people during the year either may be used to take product or may be held.

Since the creation of product results in the creation of claims of equal value, total product and total income, as defined in the preceding paragraph, must inevitably be equal.

Product Taken Collectively

When the people take some part of the product they have created they may take it individually, as described above, with individual households giving up claims to production groups in exchange for product, or they may take it collectively.

When product is taken collectively it is purchased from production groups by government units (or created by government production groups) and, as usual, when the product is created, claims of equal value are created and given to those who have created the product. If $20,000 worth of public schooling is created, those who have provided the services to create this product in the form of providing teaching services ownership of school bonds creation of blackboard erasers and the like will be allocated $20 000 worth of claims

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[2] Recall from Chapter 6 that residential buildings are thought of as belonging to production groups, so investment also includes new housing construction.

Government units may choose at their discretion (or at the discretion of the people acting through elected representatives) how many of these claims will be destroyed In the simplest case that of balanced government budgets all the claims created when the product was created will be destroyed when the product is taken collectively When $20 000 worth of public education is provided taxes equal to $20 000 will be levied In this case there is no change in the amount of claims held by the people Their aggregate savings neither increase nor decrease

Government legislators and administrators may instead decide to leave some of the newly created claims with the people and to have deficits *in their budgets In this case taxes will be levied at an amount* less than the value of the product A $5000 deficit would imply that $15 000 worth of taxes would be levied and that the people s savings would increase by $5000

Or the government may operate at a surplus destroying more claims than were created when the product was created Taxes are levied at an amount greater than the value of the product A $5000 surplus would imply that $25 000 worth of taxes would be levied and that the people s savings would decline by $5000

Thus the savings acquired by the people in any year will equal the value of investment plus government deficits or minus government surpluses The existence of a government deficit or surplus has no effect on the way total product or total income is counted All the product created is counted in total product regardless of whether and to what extent the product taken collectively is financed by taxation

Product Taken by the Rest of the World

Product may be taken or provided by and financial relations created with the rest of the world

In the aggregate the rest of the world essentially pays for product taken from the United States by providing the United States with product (and vice versa) *Should the product taken not be equal to the product provided a financial relationship will be created* If the rest of the world takes more product than it provides it will pay for the rest of the product by issuing claims to Americans If Americans take more product than the United States provides claims will be issued to foreigners

As a consequence the savings acquired by the people in any period of time will be *fully* accounted for by investment by production groups net deficits of government units and *net product taken by the rest of the* world so much on how long the product will be held as it does on other factors such as who will control the policies of the group

The common characteristics of *all* types of claims these groups will issue in order to hold product is that they are *restricted* Holders cannot use them at *any* production group they choose but only at the issuing production group and virtually all of these claims are restricted in terms of time as well so that the holders cannot present them for money or product, until a certain specified date.[3]

The Need for Money

In effect, production groups pay for product by creating and issuing restricted claims against themselves The people provide services to create the product and the people (in the aggregate) receive payment in the form of restricted claims

But you saw in section I that when individuals provide services to create product at a particular production group and receive claims equal in value to the product they created they are enabled to use these claims to take *other* product created by other production groups Thus when a person provides services to a production group he will not want to be paid with a restricted claim. There is a need for an unrestricted or general claim which can be used immediately or when desired to take product from any production group There is a need for money

The simplest way in which the financial system fulfills this need is for a production group to issue a restricted claim in the form of a promise either short term or long term to a commercial bank. The commercial bank in turn issues a checking account to the production group which can then use the money to pay those who have provided services to create the product. When the product held by the production group is eventually taken by the people so that the group once again has money it repays its bank loan and both the money and the original promise disappear

The monetary system which includes both the commercial banks and the Federal Reserve banks monetizes a wide variety of assets other than the promises issued to them by business firms Promises, in the form of bonds may be issued by business firms and sometime later be acquired by commercial banks. Government promises may be acquired by commercial and Federal Reserve banks Commercial banks may also acquire and hence monetize promises of house buyers and of the people Federal Reserve banks monetize gold by acquiring gold certificates issued by the Treasury when the latter acquires gold All these transactions involve monetization of a nonmoney asset

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[3] Some short term notes use language to the effect that the borrower "promises to pay on (date) *or on demand* the sum of (amount) ____," but the phrase is interpreted as a form of protection for the lender and gives him a right not commonly exercised. There are however some "demand notes" these are still restricted however in the sense that they cannot be presented to any production group by the holder but only to the issuer

Because as a result of these transactions, the people will always hold a certain amount of money, production groups (and other issuers of financial instruments) can get money without issuing a promise to a money issuing bank All the issuer has to do is issue a promise or share of net worth to a holder of money To the issuer, issuing a financial instrument to a commercial bank and issuing a financial instrument to a money holder have one important thing in common they both provide a means by which a restricted claim may be issued to allow the group to hold product, while an unrestricted claim—money—may be given to those who provide services

In practice the amount of money the monetary system may issue is limited by Federal Reserve controls The amount of checking accounts the commercial banks in aggregate, may have as liabilities cannot exceed a certain multiple of the reserve account they own Both the size of the multiple and the amount of reserves owned by the commercial banks are determined by the Federal Reserve officials These controls do not limit directly the amount of *lending* commercial banks may do, but only the total amount of assets they may own

Other Financial Intermediaries

Commercial banks are a type of financial intermediary Financial intermediaries are organizations whose principal assets are financial instruments which they hold in order to earn revenue, and whose principal liabilities are some kind of account The major assets of commercial banks are promises issued by private businesses, government and house buyers, their major liabilities are checking accounts, and, secondarily, savings accounts

The important role financial intermediaries play is to allow the original issuers of financial instruments to issue restricted claims in a form appropriate to their business needs while allowing the people, as ultimate *holders of financial instruments to hold instruments more appropriate to* their own neds As you have just seen, such transactions at commercial banks permit issuers to create and issue restricted claims and permit the people and other businesses to acquire money The role of financial intermediaries, in general, is to "transform" financial instruments from one type to another, just as commercial banks "transform" promises by "monetizing" them

Among the other types of financial intermediaries are savings banks and savings and loan associations, which acquire the promises of house buyers and issue savings deposit accounts, life insurance companies, which acquire government promises, corporate promises, and promises of home builders and issue the "cash value" part of your life insurance policy, mu tual funds which acquire shares of net worth of corporations and issue shares of their own net worth as accounts and pension funds which acquire promises of corporations and government units and issue nondemand accounts providing for specified annuity payments at a certain age Some people like to think of the social security program as falling into the last pension fund category although the description of social security as a financial intermediary is open to dispute

The Institutions in Perspective

In sum the increase in the amount of people's savings in any year is accounted for by investment by business firms net deficits (plus or minus) of government units, and net product (plus or minus) taken by the rest of the world The institutions described in this section fill the need for a means of establishing and maintaining the financial relationships involved in the creation by the three sectors and the acquisition by the people of such savings

There are other institutions not otherwise mentioned in this section which also help fill this need Investment banks help business firms and state and local governments create and place with holders original restricted financial instruments in the form of bonds and sometimes shares of net worth Brokerage firms (and organizations of brokerage firms in stock exchanges) bond dealers, and other institutions assist in the job of transferring existing financial instruments There are in short organized financial "markets"—both primary markets where original issuers can find buyers for original financial instruments (including negotiated promises acquired by financial intermediaries) and secondary' markets, where holders of financial instruments can sell these instruments in order to get money or another type of financial instrument.

These institutions do not alter the fundamental framework described in section I Neither is this framework altered in any wise by the existence of problems of instability to be described in the next section

III THE INSTABILITY PROBLEM

It is true that the increase in the people's savings in any period of time is equal to the amount of business investment plus deficits (or minus surpluses) of government units, and plus net product taken by (or minus net product taken from) the rest of the world. The fact that this statement is true does not imply anything about the attitudes or intentions of the people or of those who make decisions in the other three sectors

The amount of savings the people *want* to acquire at any level of total income may diverge from the amount of new financial instruments the other three sectors may *want* to issue at that same level of income. A divergence of plans among the people as acquirers of newly created financial instruments, and business, government, and the rest of the world as issuers of newly created financial instruments will lead to instability. In particular should the people want more savings (at any particular income level) than issuers want to issue, the consequence will be a decline in the level of economic activity.

The decline will continue until reductions in total income have induced the people to revise their savings plans downward enough so that the amount of savings actually created satisfies their (new) savings desires.

An approximation of the extent of the decline is furnished by the concept of the multiplier obtained by taking the reciprocal of the marginal propensity to save. The difference between the amount the people want to save and the amount of new financial instruments created is multiplied by the multiplier to get an estimate of the extent of the decline in total income. The question being asked is this: How great a decline in total income is necessary for the people to revise their savings plans downward enough so that their plans are actually realized, that is, so that the amount of new savings created by business investment, government deficits and net product taken by the rest of the world actually equals the amount people now plan to save?

For instance, if business investment is 30, government deficits are 0 and net product taken by the rest of the world is 5, savings actually created will be equal to 35. If the people want to acquire 40 worth of savings there is a divergence of 5. How far must total income decline before people actually want to save 35? With a marginal propensity to save of ½ and hence a multiplier of 2, total income would decline by 10 before the people would want to save 35.

This analysis has given rise to the concept of an *equilibrium* with respect to total income. In general, equilibrium means a balancing between opposing forces, with no tendency toward change. In the present context, "no tendency toward change" would mean that the amount people *want* to save is equal to the amount they *can* save. It would mean that investment, government deficits, and net product taken by the rest of the world would together satisfy the people's propensity to save.

The notion of equilibrium does not imply prosperity or full employment. There obviously can be equilibrium at any possible level of income, just so long as the savings plans of the people are satisfied.[4]

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[4] The existence of an equilibrium in total income does not necessarily imply that there *can be no change* in total income, but only that at the present there is no divergence between the plans of issuers and the plans of holders of financial instruments, and hence a divergence between the plans of the two groups cannot be a source of change. But, for instance, if there are 6 million persons unemployed, you can be certain *something is going to change (if only the political party in power)* because unemployment of 6 million persons is regarded as intolerable.

IV THINGS TO COME

The analysis already presented suggests some of the treatment to be given in later chapters to such subjects as the role of policy in a decline in the level of economic activity, the explanation of some types of inflation, what policy can do about these types of inflation, and even some important factors relating to the rate of growth of the economy.

Recession and Policy

If the major source of instability is the possibility that at a full employment level of total product the people will *want* to save a larger amount than they *can* save because new financial instruments created by business, government, and the rest of the world are not sufficient to satisfy the propensity to save at full employment, proper antirecession policy involves creating more financial instruments.

Antirecession policy is directed toward this objective in two general ways. First, as you will see in Chapters 15 and 16, the federal government can itself create more savings by changing its budget policy—by reducing a surplus or increasing a deficit. The government budget itself is the major policy instrument for affecting the level of economic activity.

The federal government can also encourage the creation of more financial instruments by attempting to encourage more business investment. This can be done in a number of ways, such as by changing the laws governing international investment transactions, changes in tax laws, and so on, but the most important effort in this direction involves monetary policy—changing the size of the money supply, which, as you saw in Chapter 11, results in a change in interest rates and other terms on which borrowing and lending takes place. The main presumption of antirecession monetary policy, which will be scrutinized in Chapter 17, is that reductions in interest rates may encourage more investment by encouraging more business borrowing.

General Inflation

As you have seen, when the people want to save more than issuers of financial instruments want to issue, one result is that all sectors try to take less product than is created, and a consequence is a decline in the level of economic activity. You have also seen that an antidote is the creation of additional financial instruments, which has the effect of raising the level of economic activity.

If resources, including labor, are fully employed, and if the people want to save *less* than the issuers of financial instruments want to issue one result is that all sectors try to take more product than can be created The result is expansionary but since the economy cannot in general expand output (since resources are fully employed), the effect is liable to be a rise in the general price level Inflation then can result from a set of causes that is precisely opposite to that responsible for a decline

As you will see in Chapter 18 where the subject of inflation is taken up the importance of this kind of analysis can easily be exaggerated Over creation of financial instruments relative to the people's full-employment propensity to save does not explain *all* increases in the average level of prices just as undercreation of financial instruments does not explain all unemployment but only the kind described as cyclical

When this kind of general inflation" does take place the appropriate policies of government are precisely the opposite of those for counteracting cyclical unemployment Governments must effect a reduction in the rate of creation of financial instruments either by reducing their own deficits or increasing their own surpluses or by changing the terms on which private financial transactions take place in such a manner as to discourage borrowing for buying purposes Note however, that the over all effect of such policies is contractionary if they were undertaken in a noninflationary circumstance they would probably result in recession and unemployment. Thus it is important that these policies not be followed when the price level is rising for some reason other than overcreation of financial instruments

Economic Growth

Economic growth is a highly complex and at this point little understood process it is impossible in this summary chapter to shed much light on the subject which will be examined in some detail in Chapter 20 But it is possible to note that the stability questions discussed so far are closely related to the requirements for growth Perhaps the most important way *in which these two are linked is through the subject of investment.*

The significance of investment from the point of view of stability, is that it provides savings for the people because the people do not want to take all the product they create but want to save, it is important that they be given something—financial instruments—other than product for their services From another point of view, you can say that because the people do not want to take all the product they create, it is important that business want to keep part of the product.

But investment does more than create financial instruments It increases as you saw in Chapter 5 the real capital of the economy—its productive facilities and its inventories Increasing the capital of the economy is, in general, the same thing as increasing its productive capacity.[5] Investment is very important, then, in the growth of any economy.

You turn now to a detailed examination of these subjects—of antirecession policy, inflation and anti-inflation policy, growth, and related matters concerning more U.S. economic institutions. The advance look at these subjects was offered in this chapter not so you can feel that you have already mastered these subjects but so that you will continually relate the discussion of the next six chapters to the fundamental analysis presented in the first part of this text.

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[5] Increasing capital is not, however, the *only* way of increasing the productive capacity of the economy. For instance, technological change permitting the more efficient use of existing labor and capital is also extremely important in increasing the productive capacity of the economy.

15

THE ROLE OF GOVERNMENT IN THE LEVEL OF ECONOMIC ACTIVITY

Economic activity is influenced in many ways by *decisions made by or* through political institutions. Part of America's production and distribution is *carried on directly by government agencies. In the private sector,* some types of economic activity are expressly prohibited by law (narcotics sales, and the like) while others are strictly regulated by statute or by administrative control by government units (finance, communications and so on) Some types of government activities are undertaken almost solely to influence economic activity, examples are rent control, federal farm programs, protective tariffs, and utility rate regulation. Other government activities influence economic activity only as "by products" of achieving other objectives examples are the prohibition or regulation of the sale of alcoholic beverages by the state, the drafting of men into the armed forces, and immigration laws, none of which are ordinarily regarded as specifically 'economic activities of government.

This chapter will be concerned primarily with only one type of government influence—that upon the *level* of economic activity In modern government practice, this influence operates mainly through the institution of the government *budget* The amount of product taken collectively through government units, and the amount of tax revenue collected by governments, have become such a large fraction of the United States total product that budget policy has an enormous influence upon the level of economic activity for the country as a whole.

The use of government budgets for stabilization purposes has been given the name *fiscal policy* Before turning to antirecession fiscal policy, it is well to discuss briefly some of the major issues involved in the broad question of government spending, and to consider briefly the manner in which budgets are proposed and enacted in practice.

I ECONOMIC FUNCTIONS OF THE BUDGET

At one time government budgets were seen to have only one function they served as a decision making tool for determining the quantity and type of product to be taken collectively The public sector was seen to be economically analogous to the private sector goods were purchased and paid for with tax receipts. A cardinal principle was developed out of this limited concept of the government budget budgets must always be balanced—that is, that product taken collectively by the people always be fully paid for through taxation The primary controversy at this time involved the type of tax system to employ Some argued that taxes should be levied according to the *ability to pay* which suggested that those with higher incomes or greater accumulated wealth should pay more taxes than those with less. Others argued that the public sector would be more in line with the private sector if taxes were levied according to the *benefits received* from government expenditures.

Neither of these conflicting tax principles yielded any clear-cut policy proposals, and this controversy is still with us. For instance if taxation is to be based on the ability to pay does this imply proportional tax rates (everyone taxed at the same *rate* so that the more wealthy pay a higher dollar amount of taxes) or a graduated progressive tax system (in which higher incomes are taxed at higher *rates* as well as higher dollar amounts)? Who, on the other hand are the primary beneficiaries of collectively taken product if the benefit principle is to be employed? Some have argued for instance that national defense expenditures benefit primarily the lower income groups, since they are least able to defend themselves (an argument seemingly inappropriate to the atomic age), others have argued that national defense benefits mainly the wealthy, since they have more to lose in a destructive war (also seemingly inappropriate today, since more than ever before civilian lives and not just property are at stake in wartime)

Even though neither of these taxation principles yields unambiguous policy conclusions, it is not hard to point to tax system employed today that are based on one or the other of them Federal and state income taxes, progressive in impact seem to be based on the ability-to-pay principle Gasoline taxes, on the other hand ordinarily earmarked for highway construction and maintenance, fall upon taxpayers roughly in proportion to their use of the roads, and thus seem to be based on the benefit principle.

Early economists were aware that budgets could be employed for purposes other than for taking product collectively The government's power to tax gave it a strong instrument for income redistribution if the society thought income to be inequitably distributed But most early economists would have agreed with Malthus, who more than a hundred years ago wrote

> Yet taxation is a stimulus so liable in every way to abuse and it is so absolutely necessary for the general interests of society to consider private property as sacred that no one would think of trusting to any government the means of making a different distribution of wealth with a view to the general good[1]

While there is still some resistance to utilizing the taxing power of government for redistributive purposes there is today sufficient consensus in advanced countries that income redistribution must be considered the second major function of government budgets In the United States income redistribution is achieved by means of progressive income taxation and death taxes on large fortunes transfer payments to low income groups (in the form of relief unemployment compensation and the like) and possibly through expenditures such as public education and public housing which favor low income groups (*Other types of taxation employed in the United* States notable the sales tax are regressive in impact and tend in effect to make the income distribution more inequitable But the net effect of taxation *by all levels of government is in some degree progressive that is redistributive* in the direction of equality)

Note the very close link between the goal of progressive redistribution of income and taxation according to ability to pay Note also that the recognition of the budget as a redistributive device did nothing to alter the cardinal principle that government budgets should be balanced—that tax receipts should equal government expenditure and transfer payments

The third main economic function of government budgets is of course stabilization the main subject of this chapter It was not until late in the 1930s that economists began to recognize the strong antidepression and antinflation tool governments had in their budgets Since World War II economists have arrived at virtual unanimity on the necessity of using fiscal policy to maintain economic stability But this consensus among economists has not yet been matched by a popular consensus of politicians journalists and voters because the proper application of the budget in a period of recession requires that government budgets be *unbalanced* thus violating what for centuries had been treated as the first guiding rule of budget making

II THE BUDGET CYCLE

Decisions on budget policy including stabilization fiscal policy are political decisions in the sense that they represent a consensus reached among different interests represented in political institutions The manner in which these decisions are reached are complex In this chapter we are concerned mainly with the outcome of the budget making process or budget cycle as it has been called Very little attention can be given to the complex and often technical subject of government budgeting which is a study in itself[*]

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[1] Quoted in Jesse Burkhead *Government Budgeting* (New York John Wiley & Son Inc 1955) p 61

The budget cycle can be divided into four more or less distinct steps preparation and submission enactment execution and audit

I PREPARATION AND SUBMISSION It is a major principle of budgeting followed in the United States in the federal government in all states and in most municipalities that the budget be prepared by the executive branch and submitted to the legislature In some cases especially in most county governments (which have no executive head) a committee of the legislative branch instead prepares the budget Budget preparation is a complex task and requires considerable expertness It is at the time the budget is prepared that the executive must ponder the major budgetary questions what amount and type of product should be taken collectively how income should be redistributed and what kind of stabilization program will be required

In the federal government this first step is initiated more than fourteen months before the budget is to take effect For instance for the fiscal year beginning July 1 1967 and ending June 30 1968 (called Fiscal 1968) budget planning must begin before April 1966 even though the budget will not be submitted to Congress before January 1967

The preparation of departmental budget requests is supervised by the Bureau of the Budget which later compiles reviews and in accord with presidential policy alters these departmental requests in preparation of the final document to be submitted to Congress by the President

II ENACTMENT That the authorization of expenditures proposed by the executive be a function of the legislative branch of government is more than just a budgeting principle it is virtually a requirement in a democratic form of government constituting as it does the most important single check the legislature has upon the executive It is a principle that extends back to 1215 A D and the Magna Charta

An appropriations committee of the legislature ordinarily begins the process of budget review and it is on this level that the closest scrutiny of the executive s requests is found On federal state and municipal level it is common practice for the legislature to accept with little if any change the recommendations of its appropriations committee

In the federal government the budget is by tradition sent first to the

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[*] The two standard works for those who wish to explore the subject of government budgeting further are Jesse Burkhead *Government Budgeting* a comprehensive review of budget principles and practices on all levels of government and Arthur Smithies *The Budgetary Process in the United States* (New York McGraw Hill Book Company 1955) an examination of budget practice on the federal level with suggestions for reform.

Committee on Appropriations of the House of Representatives. This Committee, larger in membership than entire legislative bodies at some lower levels of government (50 members), does not ordinarily consider the budget in any detail. The real power resides in the thirteen Appropriations Subcommittees (or, for the Defense Department budget, sub-subcommittees).

The chairmen of these subcommittees wield considerable power. Since the Appropriations Committee and the House as a whole rarely alter the work of the subcommittees, it is in these small bodies of six to fourteen members that the fate of executive department programs is often decided. No body in the House of Representatives ever considers or reviews the budget as a whole, a fact that has subjected the legislative authorization process to considerable criticism by political scientists, economists, and experts on public administration.

Invariably the House of Representatives passes appropriations *bills* that provide amounts smaller than requested by the President.

The Senate does not ordinarily begin its examination of the budget until the House has completed its work. Its examination of the budget, also conducted in Appropriations Subcommittees, is much less detailed than that of the House. Attention is very likely to be directed at the cuts made by the House in the President's budget. "The Senate," one writer notes, "thus tends to act as a court of appeal, and will very often restore a part or all of the reductions made by the House."[3]

In governments with a bicameral legislature (which includes the federal government and all but one of the states), the appropriations bills passed by the two houses (if they differ) must be reconciled by a conference committee, and the new bill arising from this conference must be passed again by both houses. The bill then goes to the chief executive for his signature or veto. In some state and municipal governments, the chief executive has the power of "item veto", that is, he can veto (or in some cases simply reduce) the appropriation for single items without vetoing the entire appropriations bill.

III EXECUTION. *After the budget is enacted it still remains for the* Bureau of the Budget to release obligational authority to departments and agencies, a process known as apportionment of the budget. The entire year's authorization is not apportioned at a single time; rather, the amount is released periodically over the year in accordance with a time program arranged between the Bureau of the Budget and the department involved. The executive department then in turn "allots" to its constituent agencies the amount apportioned to it.

Meanwhile, as each appropriation bill is signed, credit is established for the appropriate department with the Treasury of the United States. Departments incur obligations (hire employees, sign contracts), payment is made through Treasury accounts in Federal Reserve banks.

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[3] Burkhead, *op. cit.*, p. 99.

IV AUDIT It is the responsibility of each department and agency to comply with the provisions of the appropriation legislation and departments hence maintain their own internal checks and controls on expenditures This control is ordinarily supplemented with an audit procedure conducted by an agency independent of and separate from the executive In some municipalities and states audit is the responsibility of a separately elected public official usually state comptroller who is not responsible to the executive head and hence is considered to be an independent auditor In the federal government this function is the responsibility of the General Accounting Office headed by the Comptroller General of the United States which is responsible not to the President but directly to Congress

III FISCAL POLICY

The consequences of any given fiscal policy—that is any particular taxation and public expenditure program—will depend upon a complex set of variables The effects depend in part upon the political and social circumstances at the time the program is enacted upon the attitudes of businessmen and opinion leaders toward the program and certainly upon the leadership skill with which the desirability of the program is sold to the public *In short the impact of fiscal policy depends upon a large number* of factors that are essentially noneconomic in character To give adequate consideration to these noneconomic influences would make analysis extremely complex In order to keep the analysis simple such factors will be ignored in the discussion that follows But the omission of these factors should not mislead you Concentrating on economic factors alone makes fiscal policy decisions appear to have a direct simple and almost mechanical relationship with the level of economic activity It may appear that correcting depression or recession is almost as simple as pushing a button Nothing could be further from the actual facts of life in countercyclical fiscal policy The level of tax collections and of public expenditures exerts an overwhelming influence on the level of economic activity but it does not constitute the only influence nor do these influences operate in a uniformly simple manner

The Administrative Budget versus Total Payments and Receipts

As was noted earlier, there is an important difference between the federal budget whose formulation and enactment was discussed in section II, and total government expenditures and receipts The amounts given in the federal budget are always less than total federal expenditures and receipts For instance in the calendar year 1961 total federal expenditures were $102 1 billion, in the fiscal years 1961 (which starts and ends six months earlier than the calendar year 1961, but is closely comparable), budget expenditures were only $81 6 billion The reason for the difference was noted in Chapter 2 the budget includes those items subject to annual executive review and legislative enactment, while total expenditures include *these items plus such continuing programs as social security and highway* construction (both financed through trust funds")

To underline the difference of approaches, the budget prepared and submitted by the administration annually has come to be called the administrative budget two slightly different approaches to the total expenditures of the federal government are called the cash consolidated budget and the budget in the income accounts[4]

The question arises as to which of the approaches—the administrative budget or total expenditures and receipts—is the important one in fiscal policy The answer is that both are

The administrative budget is important, because it is here that fiscal policy decisions can be made This is the budget that is subject to regular review which is most amenable to legislative change It is also the budget that is foremost in the public eye When people talk about government expenditures or taxes or 'the budget,' you can be virtually certain that they are talking about the administrative budget

But it is the total expenditures and total tax receipts of the federal government that determine the way in which the public debt changes It is in this approach that you find the important information—the government deficit (and creation of new financial instruments) or surplus (and destruction of old financial instruments) The effect of government on the level of economic activity may be concealed if you look at the administrative budget for instance the administrative budget may be balanced while there may be a deficit when all government expenditures and tax receipts are considered—and it is this deficit that affects the economy Or the administrative budget may show a deficit but there may actually be a surplus when all expenditures and tax receipts are considered

For simplification in exposition, the important difference between the administrative budget and the total payments–total receipts of the federal government will be ignored in the remaining pages of this and the next chapter Reference will be simply to the budget" But the difference is important, and when you hear references to 'government spending' and the deficit' be sure that the speaker is talking about the right approach for the purposes he is pursuing

Besides the vital distinction between the administrative budget and *total payments and receipts of the federal government there is another* important distinction that is concealed when reference is made just to 'the budget'—the distinction between product taken by the people collectively (that is resource using government expenditures) and transfer payments and total product taken declines by a total of $20 billion Because there is a recession unemployment increases the average hours worked weekly declines the rate of business failure increases corporate profits fall and the index of industrial production shows a drop in industrial activity

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[4] For a discussion of the differences among the three approaches and the precise computation of each, see *The Economic Report of the President 1962 Washington D C 1962*

Since the recession originates because a reduction in investment brings about a divergence between the amount people want to save and the actual rate of creation of new financial instruments it is apparent that the appropriate government policy must be to create new financial instruments—that is to operate at a deficit Based on the reasoning of Chapter 13 it is clear that when the government operates at a deficit and issues new financial instruments the consequences will be an increase in the level of economic activity

This conclusion is correct but the reasons may seem a little unclear When *businesses* issue new financial instruments you know that businesses have taken more product—that the rate of investment has increased And *you know that when businesses take more product the people will also take* more product—that there will be a multiplier effect Similarly you know that when the *rest of the world* takes more net product other countries *will issue financial instruments for Americans to hold* and the American people will also take more product there being once again a multiplier Even an increase in the product taken by *the people* (a decline in the propensity to save) can initiate an increase in the level of economic activity *It is easy* to come to the conclusion that recovery is initiated with an increase in product taking by someone

But it is not necessary that more product be taken collectively for the government to operate at a deficit Beginning with a balanced budget in which expenditures and taxes are equal a deficit may develop with an increase in product taken collectively or with an increase in transfer payments or reduction in taxes If for instance taxes are reduced with no change in anything else a deficit will develop and new financial instruments will be issued to the people with no increase in product taken collectively And based on Chapter 13 you know that when more financial instruments are issued the level of economic activity will rise by some multiple

What is it about the issuance of financial instruments with every thing else unchanged that can bring about an increase in the level of economic activity?

Tax Reduction

It has already been assumed that the economy is in a recession where a $4 billion drop in the rate of investment together with a marginal propensity to save of 0 2 has resulted in a decline in total product of $20 billion Suppose that the government decides to try to cope with this recession by developing a deficit of $5 billion and that it decides to create this deficit by reducing taxes [6]

Whenever product is taken collectively claims equal to the value of the product are created when the product is created To the extent that taxes are levied these claims are destroyed thus when the budget is balanced all these claims are destroyed By reducing taxes by $5 billion the government is leaving undestroyed $5 billion worth of the claims that were created when the product was created A tax reduction then increases by $5 billion the new savings acquired by the people

If the people s savings are increased by $5 billion how much additional product will they take? You already know that their marginal propensity to save is 0.2 and their marginal propensity to consume is 0 8 This *means that for every dollar of increased savings they acquire* they will want to take consumer product worth $4 00 The people will take $20 billion worth of additional product Since the recession involved a reduction in product taken of $20 billion (a reduction in investment of $4 billion and in product taken by the people of $16 billion) this increase in product taken by the people is just right. The recession is over

Note one important thing When taxes were reduced by $5 billion *total product taken increased by $20 billion There is a multiplier effect*—but the multiplier is *four* When the original reduction in investment of $4 billion took place total product declined by $20 billion—a multiplier of five Clearly the multiplier for tax reductions is somewhat different from the ordinary multiplier described in Chapter 13

It is not really very much different. When investment fell by $4 billion product taken by the people fell by four times as much by $16 *billion The total decline in product taken was $16 billion plus the original* $4 billion or $20 billion When taxes were reduced by $5 billion product taken by the people once again changed by four times as much increasing by $20 billion But there is no original change in product taking to add to the $20 billion In both cases the people respond by a multiple of four but in the investment case the change in product taken by the people has to be added to the original change in investment while in the tax reduction case *the change in product taken by the people is the only change in product* taken This is why the tax reduction multiplier is always *one less* than the ordinary multiplier

Formally, the ordinary multiplier is given by

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[6] The government must first decide whether to develop a deficit by reducing taxes increasing transfers, or increasing resource using expenditures or some combination of these A discussion of how such decisions are made is postponed to the next chapter and it is simply assumed that a tax reduction has been chosen. There is an administrative problem, not discussed here in determining just what change in tax *rates* is necessary to bring a reduction in tax *receipts* of $5 billion. The Congress cannot simply vote to cut taxes by $5 billion, but must vote to alter existing rates written into law

$$\text{Ordinary multiplier} = \frac{1}{\text{Marginal propensity to save}}$$

so that with a marginal propensity to save of 0 2, the ordinary multiplier is five The tax reduction multiplier is described formally by

$$\text{Tax multiplier} = \frac{\text{Marginal propensity to consume}}{\text{Marginal propensity to save}}$$

so that with a marginal propensity to save of 0 2 and a marginal propensity to consume of 0 8, the multiplier is only four

Increase in Transfer Payments

A deficit could also be developed by increasing transfer payments As you will see in the next chapter, transfer payments tend automatically to increase and tax receipts to fall when there is a decline in the level of economic activity The effect of an increase in transfer payments is the same as that of a reduction in taxes Indeed, it is useful to think of transfer payments as 'negative taxes'

With transfer payments as with tax reductions, there is no "original' increase in product taking, so the transfer payment multiplier like the tax multiplier, is one less than the ordinary multiplier Because this is so, this smaller multiplier is known as the tax and transfer multiplier

In order to raise the level of total product by $20 billion a $5 billion increase in transfer payments is required, assuming a marginal propensity to save of 0 2 and hence a tax and transfer multiplier of four

Increase in Product Taken Collectively

The government might instead decide to increase its resource using expenditures so that the people will take more product collectively Perhaps the increase will take the form of highway construction, grants to state and local governments for school construction, or a speedup in the exploration of space Whatever the product is that will be taken collectively, claims will be created (as usual) when the product is created, and the government has decided that the claims will not be surrendered by the people when the product is taken collectively

Because in this case there is an "original' increase in product taken, the ordinary multiplier will apply The government need only increase product taken collectively by $4 billion (assuming a marginal propensity to save of 0 2) to get the required increase in total product taken of $20 billion The people will take an additional $16 billion worth of product, this increase together with the $4 billion worth of product taken collectively provides the $20 billion increase in total product taken

The ordinary or product taking multiplier then is more powerful than the tax and transfer multiplier With a marginal propensity to save of 0 2 it would take a tax reduction and/or increase in transfer payments adding up to $5 billion as well as a $5 billion deficit in order to achieve an increase of $20 billion in total product taken to relieve the recession unemployment To achieve these same results it would require only a $4 billion increase in product taken collectively and only a $4 billion deficit That a deficit incurred by additional resource-using expenditures is more powerful than one incurred by changing taxes or transfer payments does not necessarily make it a preferable course of action The decision as to what method to use depends on many factors some of them noneconomic as will be seen in the next chapter

The 'Balanced Budget Multiplier'

Of course it is not really necessary to choose among a tax cut an increase in transfer payments or an increase in product taken collectively Some combination of these three can be and usually is chosen to combat recessions

Besides these three there is a fourth way of achieving the same result—increasing total product taken by $20 billion—without any deficit at all As you will see it is not a very good way

Suppose the government increases product taken collectively not by just $4 billion but by $20 billion The effect of this increase (by itself) would be an increase in total product taken of five times as much or $100 billion Since the recession was not severe enough to require that much increase in product taking it is likely that this action by itself would create instability of another sort—inflation

But the action is not taken by itself At the same time the government increases taxes (or reduces transfer payments) by the same amount—by $20 billion The budget assumed to be in balance at the beginning remains in balance Taxes and expenditures change by the same amount

The tax increase of $20 billion by itself would tend to *reduce* total product taken by four times as much or by $80 billion The net effect of the increase in resource using expenditures which has a $100 billion expansionary effect and the increase in taxes which has an $80 billion contractional effect is an increase in total product taken of $20 billion

Note that product taken collectively rose by $20 billion and taxes rose by $20 billion so that there was a $20 billion balanced budget increase while total product increased the same amount $20 billion For a balanced budget change, the multiplier is always *one* For this reason, it is sometimes called the unit multiplier[7]

To fight periodic reductions in the level of economic activity with balanced budget changes would require such wide swings of taxation and expenditure levels as to be a major disturbant to the economy The importance of the unit multiplier lies not in its use in antirecession policy, but in that it shows that the balanced budget is not neutral in its effect To show how important this fact is, recall that in 1963 the President called upon Congress to enact a tax cut for expansional purposes Some members of Congress said that they agreed that there should be a tax cut in order to bring a higher level of economic activity, but added that they thought there should be a corresponding reduction in government expenditures The effect of the policy recommended by these congressmen would not be economic expansion but further contraction[8]

"More Money in Circulation"

Sometimes it is said that the reason deficits are expansional is that through them the government "puts more money in circulation" It is not clear whether in such statements the emphasis is upon more money or upon more circulation To clear the point, let us examine the role of money in these transactions

The expansional effect of a deficit comes about because additional financial instruments are created and issued to the people, inducing the people to take more product. There is no reason apart from the fact that the present American monetary system is not of this sort why the newly created financial instruments could not be newly printed five and ten-dollar bills instead of bonds The effect would be the same Indeed, some of the new bonds are—as noted—sold to commercial banks, and this transaction results in the creation of new money

But there is no reason either why there must be new money If all the bonds are sold to the people, or to financial intermediaries other than commercial banks the people give up money in exchange for the bonds either directly or indirectly Instead of holding their savings in the form of money, these people hold their savings in the form of government bonds savings accounts life insurance accounts and the like The total amount of money remains unchanged, but money that was being held is now being spent The money, it must be conceded, *is* being "put into circulation"

But clearly it is not the money that is important. Money, in this context serves as a financial instrument for savings purposes or as a medium of exchange The important thing is that new financial instruments are created in one form or another and the acquisition of these new instruments induces the people to take more product—by some multiple of the increase in savings created

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[7] The "balanced budget multiplier' will only be *exactly* one if the people affected by the increase in product taking have exactly the same marginal propensity to save as the people affected by the tax increase The marginal propensities to save will ordinarily be approximately equal but probably never exactly equal. What can be said with some assurance is that an increase or reduction in resource using expenditures and taxes together will result in an increase or decline in the level of *total product of approximately the same magnitude*

IV THE PROPER ROLE OF THE FEDERAL GOVERNMENT'S BUDGET

It is clear that government units may do something to prevent or at least to combat cyclical unemployment and recession Regardless of which sector initiates the decline it is possible for government units simply by incurring deficits and hence creating new financial instruments to combat any cyclical contractional tendency in the economy

This holds true for local and state governments as well as the federal government The effect of local and state deficits is the same as that of federal deficits Yet the discussion so far has been framed in terms of federal not state or local action and indeed no one expects state or local governments to develop deficits to combat decline in the level of economic activity While state or local deficits would bring an increase in the level of economic activity for the economy as a whole little or perhaps even none of the benefits might accrue to the state or locality issuing the promises

For example if the state of Michigan builds more roads and issues promises to finance the construction some additional employment would be provided for residents of the state of Michigan, but much of the road building materials and machinery would be produced outside the state Moreover those who do become employed in the state of Michigan will buy more product but much of it will be produced in other states Similarly if the city of Cleveland Ohio were to build more schools there would be more employment in the city of Cleveland However most of the materials for the school buildings would be produced outside the city and the newly employed people would buy product also produced elsewhere The same factors apply to tax cuts and to transfer payments If the state of Illinois cuts taxes or increases transfer payments the residents of that state can be expected to take more product but much of the product will be produced in other states where many of the employment opportunities will hence be provided

Credit Ratings

State and local government deficit spending also has an undesirable financial aspect If a state or local government unit engages in deficit spending the credit rating of that government unit relative to other government units may become impaired because the economic activity within that gov ernment unit's jurisdiction is not likely to be significantly improved by the deficit spending That government unit may experience financial difficulties, savers may shy away from the bonds it issues

For the federal government it is a different matter If more product is taken through the federal government, almost all the product will be produced within the United States and those who become newly employed will take product produced within the United States Similarly, if the federal government cuts taxes the additional product taken by the people will be produced and the additional employment will be provided within the United States When the federal government issues bonds during a period of unemployment, it can be expected that the level of economic activity for the whole country will be raised The credit standing of the federal government will not be impaired After allowance is made for the fact that the income from ownership of state and local government securities is not subject to federal income taxation the bonds issued by the federal government are always more attractive than securities issued by any other government unit

"Passing On The Burden"

It is sometimes argued that deficit spending is somehow wrong, because when government units borrow, "the next generation has to pay for services we get today" This argument has some validity when applied to the promises issued by state and local governments, but none when applied to the federal government

If 'paying for" the product taken collectively means giving up the ability to take some other product, an increase in collectively taken product during a recession is not "paid for" by anyone, for no one has to give up anything If the government uses resources that are otherwise unemployed, employing them to create additional product and paying for them by issuing new financial instruments, there is no cost, there is only benefit—the benefit of additional collective product, plus the benefit of the additional consumer product whose creation is induced by the issuance of government promises

Even at full employment levels, however the argument has no validity when applied to the federal government If the level of economic activity is at a maximum more product taken collectively—regardless of how it is financed, whether by taxation or by the issue of new financial instruments—must mean less product taken individually or by business firms In such a case additional product taking financed by issuing new promises would not be "costless" but the cost would be borne by the current generation, who are the ones to give up the individually taken product or the business investment For example, take the great increase in government expenditures during World War II, about half of which was deficit financed Many people argued that "future generations" would have to pay the costs of the war Were this true there need have been no shortage of consumer product during World War II But there were shortages of many types of consumer product some, like automobiles, were not produced at all, others like shoes meat, and sugar, were rationed, and others, like cigarettes and nylon stockings were just very difficult to find Were the argument true the rate of business investment during World War II need not have suffered, as a matter of fact, it declined drastically, except in war goods industries

In order to 'pass the burden to the future generations," we would have to acquire more product than we create today, and future generations would somehow have to give up product When the federal government borrows the burden" could be passed on" only if the promises were issued to the rest of the world in exchange for product Then, when the promises fell due in, say, twenty years that generation would have to give up product for them When one country borrows from another, it borrows product, and when the loan is repaid, it is repaid in product If the loan is "repaid" in money or other financial instruments which continue to be held by the other country, repayment is really just being postponed The bulk of United States government promises are sold domestically, however, and the generation that enjoys the additional collective product is also the generation that pays for the product

However, when a state or locality issues promises, it is almost a certainty that a large percentage of the promises will be acquired by "foreigners," that is, by those living outside the state or city involved Thus, deficit finance on a state or local level almost certainly passes the "burden" on to the next generation This does not mean that state and local governments should not engage in deficit finance, however In fact, one of the prime reasons why states and cities frequently finance new schools, recreation facilities, and other construction projects by issuing new promises is that they want future generations to share the cost of these facilities Such facilities are likely to be *used* by several generations, and in order to have each generation pay a share, states and localities frequently stagger debt retirement over a period of many years

Of government units, then, it seems clear that only a federal government can be called upon to issue financial instruments when there is a decline in the level of economic activity

The Other Sectors

Of course, we might instead call upon business firms to acquire additional product and to issue new financial instruments in order to combat a decline in the level of economic activity But such an expectation would be unrealistic, for we can hardly expect business men to acquire additional productive facilities and inventories when they see no prospects of future

3 That when the debt is repaid in the future, a burden will fall on future generations

4 That during a depression or recession, the country is too poor to afford additional government expenditures

Finally account must be taken of an objection to deficit finance stemming not from misunderstanding but from careful economic analysis that interest payments on the enlarged public debt, if financed through income taxes may have harmful disincentive effects

"Deficits Don't Work"

The first of these arguments which suggests that the total amount of product taken will not increase when government units incur deficits because the increase in product taken collectively will be offset by the decrease *in product taken individually, is based on faulty reasoning*

In the first place, let it be noted that the promises issued by government units need not be purchased by households directly The bonds may be acquired by commercial banks, which will issue new money to government units No one need give up anything when government units incur deficits The newly created money can be paid to those who perform the services that create the additional collectively taken product The public will thus have more 'buying power," not less

In the second place even if households did buy the promises directly from government units it is unlikely that they would take any less product, financial instruments help to satisfy the propensity to save, not to increase it The probability is that the people would not surrender money that would have been used to purchase product, it is more likely that the money surrendered would otherwise have itself been held as a financial asset The first effect of the sale of government promises, it will be recalled is merely to *change the form* in which people hold financial instruments

"Deficits Are Inflationary"

The argument that deficits lead to inflation relies on half truths Federal deficits are expansional in their effect, and if resources are fully employed the expansional effect will tend to be felt almost exclusively on the price level This would suggest that deficits not be used when there is full employment when they can indeed be inflationary But in a recession expansion is precisely what is wanted With less than full employment the expansional effect will be concentrated on the level of economic activity—employment output and income—not on the level of prices

Critics of deficit finance ordinarily do not rest their case that deficits are inflationary on the simple argument that they are expansional They associate inflation with *money* To begin with, they assume that a majority of the newly created government promises are acquired and hence "monetized" by commercial banks, so that much of the public's increased holding of financial instruments takes the form of an increase in the supply of money This is a realistic enough assumption But then it is further argued *that when the money supply increases* the price level will rise Changes in the price level are discussed in detail in a later chapter but one point can be mentioned here *If resources are fully employed, and the level of economic activity is at a near maximum* attempts of people to buy more product—which might occur if the people had more money—can certainly result in price increases But when resources are unemployed and the economy is at a low level of activity, the principal effect of attempts of people to buy more product will be to encourage more production, and to bring men back to work So prices will rise little if at all when there are deficits if there is widespread unemployment

"A Burden on the Future"

The third argument, that when the debt is repaid in the future, a burden will fall on future generations, has already been dealt with in the preceding chapter A "burden" will fall on future generations only if the borrowing is from foreigners, which is ordinarily not the case

But it should be conceded that, when government promises are redeemed, financial instruments are destroyed, and the destruction of financial instruments does tend to depress the level of economic activity, just as the issuance of financial instruments tends to raise that level Some kind of burden *can* fall on future generations, then The real question is whether *the bonds must in fact ever be redeemed Rather than being redeemed, the* likelihood is that the total amount of bonds issued by government units will continue to be increased At any rate, only an irresponsible government would redeem bonds—incur a budget surplus—in circumstances under which such an act would have a harmful effect on the economy And there is no basic reason why bonds must ever be redeemed Of course, any one who owns government bonds will undoubtedly always be able to sell his bonds for money, or get money from the government for them when they mature But when government bonds mature, the usual practice is to issue new ones, and frequently, the persons who acquire the new bonds are precisely *those who turned in the matured ones*

"Too Poor to Afford More Spending"

The fourth argument, that the country is too poor to afford more government expenditures during depressions or recessions, is the crudest of all In the first place, deficits may be achieved through tax reduction, with no increase at all in government spending But even when more government spending is undertaken, the argument is wrong As already pointed out when unemployed men are joined with idle productive facilities to create additional product, there is no cost

Those who offer this fourth objection are frequently those who counsel thrift when a family faces a financial emergency, they look only at the federal budget, not on the effects on the country as a whole, and give the same advice to the government They are making the error common in unschooled thinking of fallaciously reasoning from the part to the whole A variation of this argument looks at federal deficits as among the harmful effects of a recession or depression, rather than as a source of stimulus for recovery No comment on this idea should be necessary by now

Interest Payments, Taxes, and Incentives

While the preceding four arguments against deficits are based on misunderstanding some validity may attach to one final argument against deficits As the public debt increases, so do interest payments to holders of government promises These interest payments do not involve a burden on the economy as a whole, they are primarily *internal* transfers To the extent that they require higher taxes they also involve higher interest payments to the people Just as federal borrowing cannot "pass on the burden" of today's expenditures to future generations, so interest payments do not involve a burden on the economy

But higher interest payments do ordinarily involve higher taxes And it is argued, since the federal government receives most of its revenues in the form of income taxes the higher taxes may discourage people from making that extra effort to earn more income This might mean not working for a promotion not investing in a riskier but possibly more profitable business venture, not working overtime If higher taxes mean a smaller amount of services offered total output *at full employment* will be less

This argument has neither been proven true or false It is at least possible that higher taxes could have the *opposite* effect of inducing people to work harder or longer, to maintain a desired standard of living The likelihood is that the higher taxes required to pay interest on the public debt have little if any effect, one way or the other on people s willingness to work *but that, by weakening the motives to engage in risky investment, on* balance they have a harmful effect on the economy

The fact that higher taxes needed to pay interest charges on a larger public debt may reduce total output slightly does not mean that deficits are not to be used to combat recessions The harmful effects both short and long run, of unemployment and less than capacity production are immensely more harmful than the disincentive effects of higher taxes Neither alternative is especially attractive, but the choice between them is nonetheless an easy one

II THE REORIENTATION OF FISCAL POLICY

Prior to the Great Depression of the 1930s the predominant point of view in America was that each individual was responsible for his own employment or unemployment The proper level of economic activity was regarded as whatever resulted from the private decisions of individuals and business firms If a person became unemployed it was his own fault or at least it was his own responsibility to find a new job The government usually meaning the *county* government would become concerned only in cases of extreme personal hardship and then only on the basis of charity In 1932 when the depression was already three years old the Democratic candidate for President Franklin D Roosevelt asserted that if elected he would restore the federal budget to balance by cutting government expenditures by 25 percent The consensus of both major political parties indicates how widespread was the conviction that the proper role of government at least during depressions was frugality and retrenchment of its activities

But the depression was so overwhelming and the hardships from prolonged unemployment were so severe that despite the new President s intentions the federal government was forced to engage in additional spending without corresponding increases in taxes not out of conviction that deficit spending was desirable but out of the necessity to provide jobs in order to avoid catastrophe Today s defenders of the New Deal point with pride at the deficit spending of the thirties as a prescient way of promoting an increase in the level of economic activity But in the early days of the New Deal low levels of deficit spending were carried on with apologies and judged by public statement with a very bad conscience

Keynes's General Theory

In 1936 John Maynard Keynes published his book *The General Theory of Employment Interest and Money* A highly complex work intended mainly for economists it came to have a very wide impact It provided the first systematic analysis that defended the use of fiscal policy as a means of overcoming widespread unemployment

Before Keynes s work the prevailing economic theory with respect to declines in the level of economic activity was that the forces that caused the decline would set in motion forces that could automatically reverse the decline The normal or natural condition was full employment The older doctrine contained many attractive arguments A decline in sales for instance was claimed to cause a reduction in prices which would lead to greater sales A reduction in business investment would bring lower interest rates which would lead to greater investment Unemployment would cause lower wage rates which would lead to greater employment Any collective action to cure the decline would interfere with the natural or automatic corrective forces and therefore prolong the depression or make it worse Left alone it was argued a depression would be brief and cure itself

According to Keynes's theory the forces of decline were not automatically self-correcting The interest rate mechanism was seen as no corrective for depression for declines in business investment were brought about by a decline in investment opportunities and no rate of interest however low could induce investment with no prospect of sales Household spending depended according to the new theory not on the price level but principally on the rate of investment.

The newer theory suggested government deficit spending as an added nonautomatic corrective for depression When the rate of investment was too low to satisfy the full-employment propensity to save government deficit spending could substitute for private business investment in providing the people with savings and thereby increase employment by increasing the amount of product taken by individuals With the reappearance of private investment opportunities deficit spending could fade away and a high level of economic activity would once again be supported by business investment

The ideas contained in the *General Theory* were by no means at once universally accepted they were bitterly debated Many of those who challenged the new theory were in no sense economists, they were simply people of all levels of public prominence who bridled at the thought of government interference in economic activity Others who challenged the theory were economists even today the validity of many of the assertions and analyses presented by Keynes and his followers are still debated by professional economists. In fact many of Keynes's original arguments have been all but rejected Nevertheless a revolution had begun No longer did public officials have to apologize for the deficits which were incurred when they acted to counter unemployment. The deficit itself—once axiomatically evil—could be defended as good

Other Influences on Fiscal Policy Thinking

The revolution was brought to fruition by four other important developments The first was that only about half of the expenditures of the government during World War II were financed by taxation Government promises were issued for the other half There was little disposition to levy taxes at the rates that would have been required to avoid deficit financing But during the war there was certainly full employment. Even during the thirties when there had been some deficit spending at least 8 million remained unemployed, there was still considerable doubt about the effectiveness of deficit spending With the experience of the war it became obvious that when enough product was taken collectively and financed by issuing bonds full employment would result.

The second development occured shortly after the end of World War II With the memory of unemployment still vivid in the minds of many people the end of the war brought the specter of unemployment again By this time there was widespread conviction that the federal government could do something to prevent or overcome unemployment and that it had a responsibility for doing so This conviction represented a very significant change in attitude Whereas before 1930 employment was thought to be entirely the responsibility of the individual by 1946 there was widespread acceptance of the idea that employment was in part at least a social responsibility This point of view was made a matter of declared public policy by the Employment Act of 1946 The significant passage of this Act reads as follows

> The Congress hereby declares that it is the continuing policy and responsibility of the Federal Government to use all practicable means consistent with its needs and obligations and other essential considerations of national policy with the assistance and cooperation of industry agriculture labor and state and local governments to coordinate and utilize all its plans functions and resources for the purpose of creating and maintaining in a manner calculated to foster and promote free competitive enterprise and the general welfare conditions under which there will be afforded useful employment opportunities including self employment to those able willing and seeking to work and to promote maximum employment production and purchasing power

In addition to the declaration of policy, the Act provided for the establishment of a Council of Economic Advisers in the executive branch of the federal government The duties of the Council are to keep the President informed on the state of the economy The President is required by the Act to make periodic reports to a newly established congressional committee the Joint Economic Committee made up of members of both Houses of Congress The Committee in turn was to analyze the reports as a basis for initiating legislation designed to carry out the policy declared in the Act

The language in the statement of policy is equivocal The Act does not set down any specific action the government will take when unemployment develops and it says that whatever the government does must be consistent with the preservation of private enterprise" a highly imprecise and ideologically loaded term which has sometimes been interpreted as implying no active government role But there is little doubt about the fact that both officially and unofficially, unemployment is recognized as a responsibility of all the people and not just of those who happen to be unemployed

A third development of the past twenty five years is also important Prior to 1935 the data now refered to as national income statistics were most fragmentary Little was actually known about the state of the econ *omy and there was little basis for inductive analysis of changes in the level* of economic activity The system of national income accounts developed since that time provides a wealth of information on the state of economic activity and a much more reliable basis for the formulation of economic policy to raise the level of economic activity An analysis of the data supported the core of the Keynesian theoretical propositions

Finally especially since World War II, the very size of the federal government compels a consideration of the role of government in the level *of economic activity When the government was quite small* an increase or decrease in government expenditures or in taxes would have had relatively little effect upon the level of economic activity But when the amount of product taken collectively began to approach *20* percent of the total product the activity of government became quite important What is done through government units has an effect on the level of economic activity regardless of whether public officials or private citizens think it should A public policy concerned with the level of economic activity cannot be avoided When the level of economic activity declines the same tax structure yields smaller revenues Unless action is taken to reduce expenditures the government will be operating at a deficit

Although the tax system was designed with other purposes in mind we are quite fortunate that it operates as it does Because of the great size of federal expenditures and tax revenues any reduction in taxes that follows a drop in the level of economic activity is certain to be substantial The decline is ordinarily so great that an increase in tax rates sufficient to compensate for the reduction in tax receipts is not politically possible, so even a Congress and a President opposed to the use of fiscal policy as a counter-recession weapon will almost be forced to incur deficits when the level of economic activity declines They are not likely to reduce expenditures to compensate for a decline in tax receipts since the major portion of expenditures is for national security Because a deficit is almost unavoidable, the *question really becomes What size deficit would be best?*

From a Budget Balanced Annually to a Budget Based on Economic Conditions

When the level of economic activity was thought to be entirely the responsibility of private business and households the prevailing view on fiscal policy was that the budget of the federal government should be balanced annually Government expenditures were to be limited in each fiscal year to the amount of taxes collected within that fiscal year

It was often argued that an annually balanced budget was neutral in its effect upon the level of *economic activity As a matter of fact the tax* and expenditure decisions necessary to maintain a budget in balance an nually would accentuate both a decline and an increase in the level of economic activity The major reason for this is that taxes paid to the federal government are based largely on personal income corporate profits and the sales of certain products such as cigarettes alcoholic beverages furs cosmetics luggage and the like When the level of economic activity declines the same tax *rates* yield lower total tax revenues and it is therefore necessary to increase tax rates or reduce the amount of product taken collectively in order to maintain a balanced budget Either an increase in tax rates or a reduction in the amount of product taken collectively would further depress the level of economic activity On the other hand when the level of economic activity increases the same tax rates will yield greater revenues If budgets are to remain balanced government officials must either lower tax rates or increase the amount of product taken collectively Either action would contribute to a further expansion in the level of economic activity

Even though the actions taken by the federal government in order to keep the budget in balance can aggravate both a decline and an increase in the level of economic activity an annually balanced budget would not make much difference if the total amount of product taken collectively were small and the change in the level of economic activity were not very great When the total amount of product taken collectively becomes as much as 20 per cent of the total product as it is today in the United States and when changes in economic activity in the private sector are great as they clearly can be changes in tax rates or in the amount of product taken collectively become very important A balanced budget policy is clearly not neutral

In the realm of theory the first retreat from a budget balanced annually was to a budget balanced over the business cycle Deficits in the periods of declining activity were to be offset by surpluses in periods of prosperity This compromise had an appeal to many people who recognized the potentially harmful implications of an annually balanced budget but who were basically opposed to government deficits It was expected that government debts incurred during a depression would be paid within a relatively short time The application of the principle was another matter however There would be no problem during the first decline in economic activity following the acceptance of the policy but there would follow a problem of what would be done if the subsequent level of economic activity did not allow for the repayment of the bonds without starting another decline As a matter of fact the idea of a budget balanced over the business cycle represents little more than a transition stage in moving from the fiscal orthodoxy of an annually balanced budget to deficit spending during periods of declining economic activity without concern for subsequent retirement of government bonds

Today budget balancing—either annually or over the business cycle—has ceased to be orthodox among economists While they may disagree about timing or about priorities virtually all economists today, whether they be liberal or conservative in their personal beliefs accept the necessity *for unbalanced budgets for the maintenance of economic stability* Unbalanced budgets are the new orthodoxy, and it is recognized that the increases in the public debt arising from recession deficits may be neither quickly nor perhaps ever reversed If the rate of private sector creation of financial instruments remains for a long time insufficient to satisfy the full *employment propensity to save the public debt must continue to increase,* if the rate of private sector creation of financial instruments is more than enough to satisfy the full employment propensity to save, then of course surpluses will be in order and the public debt will be reduced

If this position is the new orthodoxy among economists it is not clear whether it is the orthodoxy of politicians, public officials, and commentators in the mass media Deficit finance runs against a well established grain and acceptance of the principle has come hard Yet despite their public utterances which are most commonly in favor of the balanced budget (to argue for deficits still seems politically unwise), federal officials seem willing to create deficits when the need arises President Eisenhower, for instance, while inveighing against deficit finance as "irresponsible," nonetheless responsibly presided over the largest peacetime deficit to that date in the fiscal year 1959, a deficit of over $12 billion Most economists are agreed that had the government followed the old policy of retrenchment and budget balancing the 1957–1958 recession would have developed into a depression of the pre–World War II model The administration followed the correct policy but refused to take public credit—or blame—for that policy

A look will be taken toward the end of this chapter at the positions of those who oppose increases in the public debt—or in any kind of debt—in principle'

III FISCAL POLICY DECISIONS IN PRACTICE

Even if everyone accepted the new orthodoxy of unbalanced budgets *for maintenance of stability, there would still be problems of implementation* When a decline in the level of economic activity appears, should the government raise its resource using expenditures should taxes be cut, or should transfer payments be increased?

There are problems associated with each one of these types of actions Each one also has its advantages In this section, a look will be taken at the problems and advantages of each, and at the usual practice and proposals for changes

Built in Stabilizers

Some of these decisions do not even have to be made In effect they have been made in advance There are in federal tax laws and other statutes provisions that tend to work for an automatic deficit in the federal budget when there is a drop in the level of economic activity These provisions are called the economy s built in stabilizers

By far the most important built in stabilizer is the federal personal income tax Because the tax is a graduated progressive tax (meaning that as incomes rise tax *rates* rise so that tax payments rise—and fall—more rapidly than income) a decline in the level of economic activity would result in a more than proportionate drop in tax payments At the same time corporate income tax payments would decline accentuating the effect. If expenditures remain constant a deficit will develop

To a lesser extent income taxes and some other taxes levied by state and local governments have the same effect although as you have seen in a protracted recession or depression it is difficult for these lower levels of government to resist the pressures to cut back on expenditures to rebalance their budgets

Another important built in stabilizer is the system of transfer payments When unemployment increases certain transfer payments such as unemployment compensation and on a local level relief payments increase as a matter of course The automatic increases in these payments tend to unbalance the budget The unemployment compensation program however is hampered by a statutory limit restricting any unemployed person to twenty six weeks of payments In a recession the administration ordinarily requests and Congress provides extensions of benefits but the extensions are then certainly not automatic or built in and in fact an administration request for extension was turned down by Congress in 1962

There are other less obvious built in stabilizers For instance if a decline in the level of economic activity means a decline in the prices of farm products as it often does there will be increased price-support payments to the farmers—not changing the farmers incomes (the increase offsets a price decline) but further unbalancing the budget.

Built in stabilizers have an important role to play in softening a decline but they cannot restore full employment and may in fact impede recovery For instance the progressive tax system provides a built in stabilizer because as total income falls tax payments decline even more rapidly But during recovery as total income rises tax payments rise even faster retarding expansion The contribution of built in stabilizers then is to make the business cycle less violent not to prevent recessions nor to bring an automatic recovery from recessions that do occur Major reliance for ending recessions must be placed on nonautomatic stabilizers, that is, on "discretionary fiscal policy," requiring administration and/or congressional action

Discretionary Fiscal Policy

Thus the question of what action to take to combat a recession appears once again It is one thing to say that a reduction in tax rates or an increase in resource using or transfer payment expenditures makes sense during a decline in the level of economic activity; it is quite another thing to decide how a cut in tax rates should be made—whose taxes, and reduced how much—or what additional expenditures should be made It is obvious that different possible cuts in tax rates will affect different people differently, and the same applies to expenditure increases

A few general statements can be made about each type of action

Tax cuts and transfer payments have the advantage that, once enacted they can be carried out extremely quickly An increase in transfer payments, once enacted, can result in the mailing out of checks in short order A tax cut can take effect through a drop in withheld taxes on the very next payday—and indeed, if it appears certain that a tax cut will be enacted households may step up their spending even before the cut is effective

A tax cut or increase in transfer payments, however rapidly they may take effect *after* enactment, may take quite a long time being enacted Congressional consideration of tax reduction unleashes tremendous pressures upon Congress by various groups who feel that *their* tax is the most deserving of reduction Any consideration of discretionary tax reduction involves questions of tax equity as well as of antirecession fiscal policy The same pressures can be created over transfer payments, as the history of the 1930s with the "bonus marchers" and other groups vehemently insisting on pensions and grants, so clearly shows

More product taken collectively has a long record as an expansional device Administrations prior to the New Deal advocated "public works" expenditures They thus have the advantage of some prior public acceptance

But public works programs, once enacted do not take *effect immediately* Since such programs almost always involve construction, there must be planning, and numerous decisions made, even before the project is begun To avoid this long preparation period it has often been proposed that there be "stand by programs," with blueprints ready, awaiting a serious decline in the level of economic activity Congress the proposal goes could even give advance authority for the expenditure, the project to be begun only when unemployment exceeds some figure—5 percent or 6 percent of the labor force

If the effects of a recession are severely localized—as they often are with most unemployment created in industrial manufacturing areas such as Pittsburgh and Detroit—public works projects in these areas can concentrate the initial expansional effects in the trouble spots Tax cuts and transfer payments must be more general in their effects

These statements concerning tax cuts transfer payments and resource using expenditures all involve practical aspects On principle however the past few years have seen an increased interest on the part of economists in tax reductions and transfer payment increases in times of recession while public works projects have correspondingly lost favor The basis for this position is the judgment that the level of collective product taking should depend primarily on the need and public desire for collectively taken product and not on the level of economic activity If schools and dams are needed and wanted by the people their construction should not be postponed until the level of economic activity declines If they are not needed or wanted they should not be built This line of argument suggests that the level of resource using expenditures should be determined without reference to the level of economic activity the administration and Congress should consider what amount of product should be taken collectively in accordance with their analysis of present needs and public sentiment The level of tax receipts then should be considered separately not as a way of paying for the collectively taken product but to create the necessary deficit balance or surplus appropriate to maintain economic stability

Proposals for Speedier Antirecession Action

Discretionary tax cuts transfer payment increases and public works projects all share the same disadvantage delay Tax reductions and transfer payment increases—except for the automatic ones—take time for enactment public works projects take time in getting under way all three also share difficulty in being reversed when the recession is over It is difficult to raise taxes after once cutting them or to take away a transfer payment once regularly granted and a half finished public works project must be completed or wasted even if the level of economic activity is once again high

For these reasons recent administrations have placed first reliance on taking actions not requiring congressional approval and not appearing permanent An order can go out to speed up existing projects such as the huge highway construction project or government purchases originally planned for later in the year The President can order a hurry up in income tax refund checks or other payments if the timing of the recession allows These actions are quick and reversible and they are politically advantageous because the deficit they create is wiped out by the end of the fiscal year so they seem—according to the old orthodoxy of budget balancing—fiscally responsible But like the automatic stabilizers they are not enough especially if the recession is protracted

Hence a number of proposals have been made for statutory changes allowing quicker action against recessions Most of the proposals would involve a loss of power for Congress

Some of the proposals call for an increase in discretionary power for the executive branch The most important of these would give the President perhaps with Congress having a veto power the right to change income tax rates applicable to each level of income The most common versions of this proposal would give the President this power only when certain indices of economic activity such as percentage of the labor force unemployed showed recession signs and the tax rates would revert to their old levels after six months Such a proposal was made in 1961 by President Kennedy following on the recommendations of the Commission on Money and Credit a widely quoted private study group[1] Because Congress apparently regards its tax levying power as one of its most important no action appears likely in the near future But this proposal will be around for a long time and some change of this sort may eventually be made

Similar proposals already mentioned would give the executive branch stand by authority for public works projects

Similar in purpose but different in impact are the proposals that when the chosen economic indicators point to a recession tax rates be cut across the board automatically without executive discretion These proposals for formula flexibility (so called because tax rates would vary in accordance with some predetermined formula) would greatly augment the power of built in stabilizers But they ignore the fact that the indicators themselves cannot distinguish as can an analyst armed with a variety of data between cyclical and structural unemployment.

Another important reform proposal would discontinue the present twenty six week limit on unemployment compensation payments substituting other safeguards to assure that the lazy do not make a permanent living *from their unemployment checks*

IV DEBT PRO AND CON

There is a traditional view in America derived from Puritanism and the Calvinist Protestant Ethic, that holds debt to be a sign of character weakness This traditional concept, combined with a historical distrust of strong central governmental authority which is a heritage of past oppressions and is enshrined in our carefully constructed checks and balances political system leads those who hold to traditional concepts to view government debt as the most dangerous of all

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[1] *Commission on Money and Credit Their Influence on Jobs Prices and Growth* (Englewood Cliffs N J Prentice Hall Inc. 1961) p 137

Thus it has been with a growing sense of frustration that those with these traditional views have watched the public debt—the indebtedness of the federal government—climb in postwar years to a level in excess of $300 *billion and the level of total indebtedness public and private pass the $1* trillion mark And thus it is that they view with suspicion the modern economic theory that holds debt in general to be not only generally harmless but even necessary and the public debt as an important government weapon for the maintenance of stability

Often conservatives oppose deficit finance because they associate it with high levels of government expenditure which for reasons unrelated to debt they oppose It is to be stressed that there is no necessary relation between antirecession fiscal policy and high levels of public expenditures Indeed the whole bent of current thinking about fiscal policy is to divorce stabilization policy from the amount of product taken collectively and it is this current view that leads economists generally to favor major reliance on tax rate changes rather than public works projects—even though many of the same economists personally believe that current levels of resource-using federal expenditures are inadequate for present needs

In this last section the views of those who oppose deficit finance on principle will be reviewed and a look will be taken at economists views concerning the important role of debt in the maintenance of stability

Opposition to Public Indebtedness

The opposition of the minority of traditionalists who view with misgivings and even alarm any proposals to reduce taxes or increase government expenditures as a means to avoid or combat a decline in economic activity seem to center around two major fears

The first is that too many decisions become centered in the hands of public officials When greater reliance is placed upon the decision making processes of government there is a danger that government officials will not be adequately controlled, public officials will acquire too much power Decisions may be made that are contrary to the general interest or arbitrary or merely responses to pressures of special interests.

By this reasoning effective control over government officials requires that no more can be spent by government units than can be paid for with taxes. This way is the only way in which government activity can be kept within proper bounds and that the power of public officials can be adequately controlled

This view has strong historic antecedents Indeed, one of the major steps in the development of modern free political institutions was the acquisition of taxing power by the English Parliament from the monarchy in the fourteenth century The power of the purse largely taken away the king could no longer be arbitrary or capricious in either fiscal or nonfiscal acts Similarly taxes are today regarded as a check on the power of the central government Ambitious programs are limited by the natural reluctance of the people to be taxed more heavily—but if the government need no longer tax in order to spend if deficit spending is available as an alternative this popular check on the power of the government is diminished in importance.

Of course this view has meaning only to those who view modern government as oppressive The United States is not ruled by an arbitrary monarch but by elected representatives Irresponsible government usually means loss of office for incumbents. The checks important when the executive served for life are not as important when the executive serves a four year elective term and when other members of his party—also blamed when things go wrong—face the voters annually Moreover where early parliaments held the taxing power as a check on an arbitrary executive the U S Congress has an even more potent check all federal programs requiring money expenditures must first be authorized by Congress and all money paid out must be appropriated by Congress regardless of whether budgets are balanced or unbalanced

Those who nonetheless see in deficit finance a hazard of ever increasing central government power must weigh this hazard against the hazards of the alternatives A powerful central government can be arbitrary and unjust Periodic widespread unemployment involves as great a hazard if the operation of the private sector of the economy results in the arbitrary distribution of unemployment and hardship there is also injustice And it might be asked which road to authoritarianism is quicker and surer deficit finance with all the safeguards of Constitutional checks and balances modern budgetary controls and administrative procedures or widespread unemployment aggravated by government action directed at keeping its budget balanced

Fear of Debt

The second major objection to the reduction of taxes or the increase of the amount of product taken collectively is concerned with the fear of *government debt per se*

There is a strong sentiment running through the mores of the American people that debt is bad and that government debt is the worst kind of debt. The idea is implied when debt is referred to as living off the future or when it is said that government deficits saddle the future with the burden of a public debt Debts of business firms are thought to be bad enough but at least they have the saving grace of being for productive purposes because they are associated with increases in productive facilities Sound finance compels a firm to use retained earnings or to issue new stock except in emergencies and to eliminate debt as rapidly as possible It would be best to avoid debt altogether

The precepts that should guide a business firm or an individual are said to apply with greater force to a government unit Government should spend only as much as it can collect in taxes Allowing the government to spend in excess of tax collections is like allowing the king to debase the coinage the results are waste extravagance and eventual bankruptcy In emergencies such as war there may be no alternative to deficit spending but the debts so contracted should be repaid at the earliest possible time An individual must pay off his debts and so should the government

The same people who express fear of debt are most often among those who view financial saving as a virtue The systematic saving by the accumulation of financial instruments is the mark of a man of character The form of one s saving is also important to be useful it should be liquid It should be convertible to money without loss of principal so that it is available in times of emergency Bank accounts are therefore the best type of saving provided the bank is managed conservatively meaning that the assets the bank holds are virtually riskless Government bonds are also good because they can be cashed or sold Saving through life insurance is good because it is systematic and you always know what the cash value of your policy is If you die before a certain age your beneficiaries will get a fixed sum of money and if you live you can have a fixed income in retirement In general savings should not be risky because they are likely not to be available just when the money is needed

The conflict in the sentiments expressed above may be seen by taking *an extreme example Suppose that all people paid cash* for everything they bought and also saved by holding bank accounts or other riskless financial instruments Suppose also that all business firms financed the product they hold by retained earnings or by issuing only stock they contract no debts and issue no bonds And suppose further that all government units operated at a balanced budget or a surplus This situation would not be merely difficult it would be impossible! People are saving by holding riskless or little risk financial instruments but no such financial instruments are issued! As a matter of fact of course the people can save by acquiring riskless financial instruments only when such financial instruments are issued! If it is good for people and business firms to hold government bonds it must be good for government units to operate at a deficit so that they issue the bonds If it is good for people to hold accounts at banks that limit their assets to government bonds and the promises of business firms and individ uals it must be good for business firms government units and individuals to have debts If it is good for people to hold accounts at savings and loan associations that hold primarily the promises of house buyers it must be good for people to buy houses with mortgage loans If it is good for people to hold accounts at life insurance companies that hold bonds of government and business firms and promises of house buyers government, business firms and house buyers must issue promises. It is not possible to have one without the other

If the people had no desire to save or if the people wanted to save only by holding stock in business firms rather than through holding bank accounts accounts at saving and loan associations government bonds or bonds of business firms the situation would be different. But the apparent fact is that people want to work, but they do not want to take product equal to the value of the product they create Unless business firms take product and issue the kind of financial instruments the people want or unless financial instruments are issued when product is taken collectively through government units there will be unemployment. When product is created by the people and not taken by them and not wanted by business firms either there is unsold inventory, business firms then discharge workers and cut back production.

Debt and the Desire to Save

The point is that the financial practices of government units business firms and house buyers must be consistent with the amount and type of financial instruments the people want to acquire. In recent years during periods of full employment, personal saving has been around $30 billion annually This saving takes the form of savings accounts at banks accounts at savings and loan associations accounts at life insurance companies pension funds and bonds of government units and business firms and stocks of business firms It has been made possible by the fact that business firms have issued bonds and stocks, house buyers have contracted mortgage loans and government units have issued bonds at a combined rate of approximately $30 billion a year In addition, the book value of the stock of business firms held by the people has increased by approximately $10 billion a year due to retained earnings of corporations, thereby adding further to the people's savings.

If mortgage loans had been smaller, or if business firms had issued fewer stocks and bonds, or if government deficits had been smaller, personal saving would have been less. Given the propensity of the people to save, if saving had been less the people would have taken less product. The propensity to save in the American economy is a matter of very long standing and it would appear easier to accommodate this propensity to save than to change it It is not at all clear that it would be desirable to change it even if that were possible When business investment is high a high propensity to save serves a very useful purpose

The accommodation of the people's apparent present propensity to save in the form they are now saving requires an annual increase in total indebtedness in the economy of approximately $30 billion If this amount of indebtedness is provided by business firms and house buyers there is no need for government deficits in fact government deficits along with deficits of business firms and house buyers could lead to inflation But if this amount of new indebtedness is not provided privately either it will be provided by government units or there will be unemployment The only alternative is a reduction in the people's propensity to save

The Necessity for Annual Increases in Debt

This analysis implies that for the economy as a whole indebtedness is never reduced it increases annually Individual business firms government units and house buyers may reduce their debts but other business firms government units and house buyers must increase their debts by a greater amount Without an ever increasing indebtedness for the whole economy it will be impossible for people to increase their savings in the forms to which they have become accustomed

In some years the increase in debts of business firms and house buyers may be greater than the amount people wish to save at full employment At such times debts of government units may be reduced without a reduction in employment Private debt then becomes in part a substitute for public debt but total debt still increases Only if the increase in private debt is greater than the amount people wish to save at full employment can the total debt of government be reduced without causing unemployment Since 1929 there have been only two years (1946 and 1947) in which the combined debts of all government units at all levels have declined It appears unlikely that the experience of the future will be much different.

The point is not that debt of *any* kind public or private is necessarily good in itself The point is rather that riskless savings and certain types of debt are simply one and the same thing There must be both or neither To say that there should be more savings accounts and less debt is to expect the impossible Either the propensity to save in the form to which the people have become accustomed must be accommodated by an ever increasing total debt or the propensity to save must decline The only alternative is frustration for some who want to work and a decline in the level of economic activity

It must be emphasized that this does not mean that if the propensity of households to save is to be accommodated it must be by the debts of government units So far as households are concerned the debts of business firms and house buyers serve the purpose as well as debts of government units These private debts also make it possible for households to hold accounts at banks savings and loan associations insurance companies and other financial intermediaries But as long as business firms and house buyers are free to issue or not issue bonds or promises as they see fit there is at least the strong possibility that the amount of new financial instruments they issue will not be the amount of financial saving households desire at full employment At such times either government units will also issue new bonds or there will not be full employment One may still insist that it would be better for households to be frustrated in their desire to increase their financial saving than for government units to increase their indebtedness Those who so insist must be prepared to accept the consequences in a level of economic activity that is substantially less than full employment

It is also to be emphasized that an increase in the debts of government units does not necessarily mean an increase in what is usually referred to as the public debt or the debt of the federal government Securities issued by state and local government units serve the same purposes for households as the debts of business firms house buyers and the federal government But as a matter of practice it cannot be expected that debt increases of state and local government units will act counter to the increases in private debt there is a tendency for the debts of state and local government units to increase most at the same time as debt increases of business firms and house buyers are greatest

It is not possible to state a specific amount of annual increase in total indebtedness necessary to accommodate the propensity of households to save because the propensity to save has not been completely stable There have been years such as 1946 1950 and 1955 in which the zeal of households to get product is so great that a relatively small increase in indebtedness was adequate to satisfy the propensity to save In other years such as 1949 1953 and 1958 the propensity to save was apparently much greater because the propensity to save at full employment was not met by the increase in indebtedness Data suggest that in recent years households have wanted to accumulate financial instruments at the rate of approximately $30 billion a year when there has been full employment

You have already seen that a minority opposes anti recession fiscal policy because it fears an excessively active economic role for government But the role described here for the federal government is in an important sense a passive one The people decide how much they want to save at a full-employment level of economic activity Businesses state and local government and the rest of the world through decisions reflecting or dinary economic motives unrelated to the desire for stability determine how great their issue of new financial instruments will be. Given these decisions, it is up to the federal government to make up the difference—to add to the creation of financial instruments with deficits when it is otherwise insufficient, and to reduce it through surplus when it is excessive.

The discussion of this chapter, and the contemporary debates over fiscal policy, are ample evidence that this task is more easily set forth in words than accomplished.

17

THE FINANCIAL SYSTEM AND THE LEVEL OF ECONOMIC ACTIVITY

Discussion of the problem of recessions and depressions always brings up the subject of the financial structure of the economy. It is not hard to see why. One lesson *even the most casual student cannot have failed to* grasp from the past five chapters is that there is a very close relationship between the subject of finance and the problem of economic instability. In fact, it has already been said that the whole issue of full employment and prosperity as against cyclical unemployment and recession hangs on the delicate financial relationship between the people, as ultimate holders of financial instruments for the economy, and the other three sectors—government, business, and the rest of the world—as ultimate issuers of financial instruments.

The nature of this financial relationship, and the problems associated with it that lead to instability, have already been discussed. This chapter, then, does not deal with "the financial aspect" of the problem of instability. It cannot—for the whole problem is basically financial in nature.

The fact that the problem of cyclical instability is fundamentally a financial one means that the financial system—the man-made complex of legal and institutional arrangements for the creation, issue, sale, holding, and resale of financial instruments—is extremely important. The significance of the financial system is indicated by two outstanding facts:

1. *It is possible for a financial system to contain* basic faults and weaknesses such that a decline in the level of economic activity, especially a severe one, can result in a financial collapse, or "panic," which itself can reinforce the decline in production and employment.

were failing Today in the absence of these weaknesses many regard the interest rate as a strategic factor in fighting recession or depression

This chapter will be divided into three parts The first part deals with financial panic—what it was why it came about and how it reinforced any decline in the level of economic activity The second reviews the important changes in the financial system that today make financial *panic extremely unlikely The third part examines the use of financial* policy as a means of combatting recessions and depressions

I FINANCIAL PANIC

Few people under thirty five have ever experienced what is known as financial panic but the image of these crises of confidence in and liquidity of the financial system sometimes culminating in virtual collapse of the system remains in bold outline in the minds of many whose only knowledge of them is second hand So closely associated in the pre–1940 period were depression and financial panic that few regarded them as distinct and separate events It is worthy of note that before the 1930s a decline in the level of economic activity was more commonly referred to as a panic than as a depression or recession' Thus American historians make reference for instance to the Panic of 1873 the Panic of 1893 and the Panic of 1907

In general financial panics were crises in which a set of factors would act together to destroy the value of financial instruments They involved the general loss of public confidence in financial instruments especially in deposit accounts at financial intermediaries then an effort on the part of the people to get sound money such as gold or currency *in exchange for other instruments—a situation known as illiquidity of the* financial system—a collapse of the values of the financial instruments held frequently because of the bankruptcy of the institutions that issued them

Less analytically but perhaps more descriptively a financial panic involved great lines of people forming at the doors of financial intermediaries demanding currency because they believed their deposit accounts would soon be worth nothing but whose very demands for currency frequently assured that their accounts would in fact become worthless These bank runs were frequently associated with forced payment of bank loans resulting in collapse of nonfinancial businesses with bank failures and with a loss of principal and perhaps virtual ruin for the people holding deposit accounts

Holders of original restricted financial instruments—stocks bonds and the like as opposed to accounts with intermediaries—would also fear for the value of their securities and would rush to sell them before they became valueless Of course a rush to sell on the part of many holders only succeeded in driving the prices of these instruments down. The psychology of crisis was one of self fulfilling prophecies the fact that people thought that securities would lose their value meant that they would lose their value the fact that they expected banks to fail meant that banks *did* fail the fact that lenders expected that borrowers could not repay leading them to demand immediate payment, frequently meant that the borrowers *could not* repay

The Causes of Panic

If holders of financial instruments had had confidence in the integrity of their holdings they would have been happy to have kept them The initial step in the development of financial panic was ordinarily a general loss of confidence in financial holdings especially in bank deposits To see why this loss of confidence appeared and what its effects were let us examine the ordinary path of development of financial panic in the pre–1933 American financial system

First it must be understood that a localized financial panic could appear with no general decline in the level of economic activity One main reason was that the American banking structure was extremely atomized in contrast to the concentrated banking systems of Europe and Canada Branch banking rapidly growing today (in the states in which it is permitted) was much less known in the America of the 1920s and virtually unknown before World War I Today there are approximately 13 000 separate commercial banks—not branches but separate banking firms In 1915 there were over 25 000 and in 1925 over 27 000 Although there were many large banks in a banking system so fragmented the small local banks predominated Small banks are much more vulnerable to failure than large banks since small, local banks tend to hold less diversified assets and are much more tied to the fortunes of the community they serve than are banks with branches in many communities specializing economically in many different types of products

Some areas were overbanked because it was far too easy to start up a new banking institution. The existence of too many banks in a community would mean that at least one and perhaps all of the banks would be too weak to withstand losses arising out of assets going sour" because of a business failure by a borrower or similar cause regardless of whether the failure was associated with a depression Moreover before the banking reforms of the 1930s bank assets were frequently poorly chosen often highly illiquid sometimes highly speculative. Again the small, unit (no branch) banks were at the greatest disadvantage, since they had (and have) the most difficulty attracting good management, whose job it is to select assets

The Loss of Confidence

The repeated demonstrations of weakness on the part of the banking system would lead deposit account owners, on first hearing of a decline in production and employment, to hurry to the banks to exchange their accounts for something in which they had more confidence—currency or specie (gold coins)

Sometimes the first inkling the depositors would have of a new depression and panic would be an unexpected announcement that a local bank had already suspended operations The unlucky depositors at such an institution would never have their chance to make a "run on the bank." Such a failure would certainly induce depositors at other institutions to hurry to close their accounts

Assume, however, that all the banks are still solvent when the run begins Losses if any have resulted in reductions in the value of net worth, so that the banks assets still exceed their liabilities in value While in many cases the banks held "bad assets," assume also that when the run begins all their assets are still 'good," in the sense that the borrowers are able to make the regular interest payments, and are able to repay the loans when they fall due Now depositors demand to close their accounts What do they ask for?

In panics of the past, depositors would often demand—and were entitled to—specie Gold coins, unlike today's "token coins," were "full bodied' , for instance, a $10 gold piece was made of $10 worth of gold *Gold money then, seemed "sounder" than currency*[1] The next best thing to hold was currency, because its value was not expected to be wiped out by the panic

If depositors should demand specie, they simply could not all be satisfied The amount of monetary gold in the economy was limited, and just could not be expanded merely because the people wanted gold

In principle, it should have been easier to provide paper currency than specie After all, there was no physical limit to the amount of currency in the system If the people wanted more currency instead of checking accounts or saving accounts could not more currency simply be printed up and distributed? Unfortunately, it was not that simple. The banks were hard pressed to give enough currency or gold to their depositors. Let us see why.

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[1] *Moreover, one method of fighting a depression before World War II was* to try to increase net product taken by the rest of the world by increasing the price of gold an action that would increase the price Americans had to pay for foreign currency and hence for foreign product, and reduce the price foreigners had to pay for U S dollars and hence for American product. If you had thought the government was going to "devalue the dollar in this manner, you would have wanted to hold gold If you could have bought a certain amount of gold one week for $10 000 and sold it the next for $15,000 you would have made a handsome profit.

Illiquidity of the Banking System

The fundamental problem with the banking system, and indeed with the financial system, can be described in one word: illiquidity. If the people were to be able to get currency or specie on demand in exchange for their accounts, the banks had to have some way of getting currency or specie in exchange for their assets with little or no loss in value. Banks could do so in moderate amounts. But when moderate amounts would not do, and especially when the entire banking system was in desperate need of currency or specie, it was impossible for the banks to get anywhere near enough. The accounts issued by the banks were transferable—they could leave the bank any time, but the bank's assets were, by and large, not transferable but frozen.

When the people demand currency in exchange for their accounts, the banks must give it to them. In fact, the technical expression for a checking account is a "demand deposit." Commercial banks, as today, held only a small fraction of their assets in the form of currency. A greater part was held in the form of reserve accounts, and the greatest part in the form of promises of various types.

With a panic already begun, where could the commercial banks get currency in order to satisfy the unexpected demands?

Could they sell some of their promises—government bonds, for instance, or corporate bonds, or high-quality private notes? Such might have been a good policy except that there were no buyers. The banking system as a whole could get currency from such transactions only if people and businesses wanted to give up currency to get promises to hold. But in times of panic, the people and businesses wanted to get currency.

Perhaps the government or the Federal Reserve could bail out the banks by taking over some of their assets and giving them currency in exchange. But neither the government nor the Federal Reserve believed they had the responsibility or the power to do so.

Perhaps the banks could demand immediate payment on some of their loans. This they were forced to do, with consequences that will be noted momentarily. The banks could also, as now, give up reserve accounts to the Federal Reserve in exchange for currency, and this they did do too.

But reducing the amount of reserve accounts in order to get currency meant that (with unchanged required reserve ratios) the banks would be forced to reduce their checking account liabilities by some multiple and this could be done only by disposing of more assets So the apparent solution to the problem—giving up reserves in exchange for currency—actually compounded the problem by forcing the banks to dispose of more assets, and this meant attempting once again, to sell promises demand payment on loans refuse renewal of loans that were coming due and so on

The more the banks were forced to dispose of assets the more individuals and businesses who were indebted to the banks were forced into bankruptcy A business that possibly could have weathered the storm of the depression and eventually made good on its obligations would be forced into immediate liquidation by demand for immediate repayment of a loan House mortgages which were ordinarily not monthly payment loans as they are today but instead single payment five and ten year loans were highly illiquid as were loans made to business firms for productive facilities While the borrowers in these cases might have been fundamentally sound demand for payment would usually lead to foreclosure rather than repayment. And banks had great amounts of such illiquid assets

Some of the assets held by banks then that would have been valuable over the long run, were valueless in the short run A bank that was sound' in the sense that assets exceeded liabilities by a substantial amount could quickly become bankrupt if it tried to collect on some of its assets Bank runs that often began with the failure of an isolated few weak commercial banks would often culminate with the failure of many stronger ones Between the financial crash of late 1929 and the banking reforms of 1933 9000 commercial banks failed in the United States

Cumulative Effects

Note the cumulative effects of the development of financial panic as explained thus far

Panics began with a loss of confidence in financial instruments especially deposit accounts If the holders of these accounts had had faith in them and had not demanded currency or specie chances are excellent that in most cases they would not have sustained losses It was their demands for currency and specie that tended to make their accounts worthless

Most banks held assets that were good at least *in the long run* The crises were crises of liquidity not (at first) of solvency But the banks' assets like the deposit accounts owned by the people and businesses were good only so long as immediate payment was not demanded In most cases it was the demand for immediate payment and not the fundamental economic strength or weakness of the borrower that made the assets lose their value.

With business borrowers forced into liquidation production declined still further and more men were forced out of work With many people's financial assets seriously depleted or altogether wiped out many found their ability to buy significantly reduced and product taking declined still further Some people trying to weather the depression by living off their farm or off vegetables grown in back yards, found their farms or homes taken through foreclosure In a hundred ways the collapse of the financial system reinforced the effects of the decline in economic activity and made any depression more severe

Federal Reserve Policy Before 1933

Financial panics developed then from four major faults in the pre-1933 financial system its atomistic structure with too many small weak and or mismanaged banks a heritage of mistrust in deposit accounts, so that it took little to shake popular confidence and lead to panic the existence of a gold specie monetary system in which the basic legal tender unit could not be increased or diminished in supply as the public need dictated and perhaps most fundamentally the extreme illiquidity of the banking system combined with the ease with which depositors were supposed to be able to demand currency or specie in exchange for their accounts. Perhaps a fifth factor should be added the role of government. Official attitudes usually looked on reform proposals, or suggestions for emergency action as designs for tinkering with the soundness of money In the 1929–1933 period of the Great Depression for instance the theory dominating government attitudes was that both depression and panic were psychological rather than fundamental in nature that they reflected lost confidence in the economy and that such policies as ending the gold standard easing credit through Federal Reserve expansional actions, or government acquisition of mortgages to prevent foreclosure by illiquid banks, would further destroy confidence In February of 1933 just as the depression was reaching its lowest depths and but days after the failure of the First National Bank of Detroit had forced the closing of all Michigan's banks, President Hoover could still warn President-elect Roosevelt that it would steady the country greatly if there could be prompt assurance [from Roosevelt] that there will be no tampering or inflation of the currency Similar attitudes were officially expressed by Republican and Democratic officials alike in most of the depressions prior to that of the thirties.

The Federal Reserve system was established in 1914 in belief that the panics of the past had to be curbed and in particular in response to the severe financial panic of 1907 Between its founding and the financial reforms of 1933, the Federal Reserve was required to deal with two panics that of 1920–1921 and that of 1929–1933 Both panics were associated with severe depressions, and the second one resulted in the most complete collapse of the financial system ever experienced in the United States It would seem, at first glance at any rate, that the Federal Reserve could have done a good deal to mitigate the effects of both panics

It has already been noted that heavy demands for currency reduce the reserve accounts of the commercial banks, thus forcing a multiple contraction of the money supply and forcing commercial banks to dispose of assets by selling or demanding payment for currency This would seem to call for the Federal Reserve to lower reserve requirements, in order to prevent the multiple contraction of the money supply and of credit, to buy government bonds on the open market, in order to provide more reserves to the banks, and to lower discount rates in order to encourage the borrowing of reserves from the Federal Reserve banks What was the record of the Federal Reserve banks during these two depressions?

It should first be made clear that the Federal Reserve system before 1933 was not the Federal Reserve system of today Its powers were severely limited For one thing, under the gold standard the Federal Reserve was required to own a certain amount of gold to "back" its issue of currency *In 1920–1921* and again in *1933*, it was forced to avoid expansional monetary policy because its own "reserves"—gold—were so low In the second place, it had very limited power to lend reserves to the commercial banks, government bonds, for instance, were not eligible as collateral Finally it had no power at all to change reserve requirements, which were determined by Congress

Even so, the Federal Reserve was not really thought of as an institution whose main responsibility was the promotion of economic stability This was especially true in 1920–1921, but it was to a large *extent also true in the Great Depression ten years later The greater con*cern apparently was with the "soundness" of money—a notion related to the mysterious properties of gold

The Federal Reserve also lacked the power it now has to control margin requirements on stock market purchases In response to the speculative excesses of 1928–1929, it attempted to reduce the amount of credit used for speculative purposes by general contraction of the money supply

At the onset of the financial panic of 1929, the Federal Reserve began buying government bonds on the open market to provide commercial banks with additional reserves, and most of the Federal Reserve banks rapidly reduced their discount rates These policies of expansion came to a halt, however, in late 1931, when disturbingly large numbers of commercial banks began to fail Contractional policies replaced expansional ones. The Federal Reserve banks followed a policy the opposite of what would seem rational. Why would they contract the money supply when commercial banks began to fail?

It seems likely that the policy, while it had something to do with the Federal Reserve's loss of gold at the same time, was primarily directed at maintaining the "soundness" of money in order to restore public confidence in the banks. This peculiar reasoning was in line with the official attitude mentioned earlier, that the fundamental problem of depression and panic was one of public confidence. Even so, it ignored the fact that it was primarily the banks, and not money, that had lost the confidence of the public.

The record shows little contribution on the part of the Federal Reserve to the restoration of either confidence or liquidity in the financial system, and probably much that strengthened the forces of financial collapse.

There were other weaknesses in the financial system. There was no system of deposit insurance. There was no institution, banking or otherwise, that would purchase the good but illiquid assets held by banks—assets such as mortgage loans—so that the banks could maintain their operations and meet their depositors' demands for currency. And there was no adequate system within the Federal Reserve, the federal government, or state governments for inspection of bank assets to assure their quality.

II REFORM OF THE FINANCIAL STRUCTURE

Changes in the economic and financial policy of the government and of the Federal Reserve banks since the crisis of 1933 have greatly reduced the likelihood of a recurrence of the kind of financial panic that gripped the nation in every depression before World War II. The first act of the new administration taking power in March 1933 was to order the closing of all commercial banks. Supervisory agencies inspected the closed banks, dividing them into three groups: the first group, numbering in the thousands, was declared hopeless and never reopened; the second group, close to insolvency, opened with support from government agencies to be discussed later; the third group, clearly sound banks, were reopened without qualification. These actions, which let the public know in which banks they could place their trust, restored public confidence in the reopened banks. After March 1933 the public began redepositing currency, reopening closed accounts. Where 9000 banks closed in the years 1930–1933, from 1940 to the present there have been virtually none forced to close their doors Financial panic has completely ceased to be an ordinary part of a decline in the level of economic activity

With the people's confidence in banks temporarily restored the way was clear for actions that would alter the financial system either temporarily or permanently to provide for security of deposit accounts and liquidity for the system Action was taken on each of the four major faults in the financial system—its weak atomistic structure the lack of public confidence the illiquidity of the system and the inflexibility of a gold specie monetary system

The Specie System

The United States went off the gold specie system in 1933 and has never returned The new administration established a new monetary system in which gold is used for international transactions but not for domestic ones People could no longer demand gold for their accounts Under the present system the amount of legal tender —paper and token coin currency—is determined by the amount people want to hold

The Banking Structure

The United States still has by and large, a highly atomistic banking structure with many small independent banks rather than a few extremely large ones But a number of important changes were made to reduce the banks vulnerability to panic

For one thing many states have eased the restrictions on branch banking thus creating stronger banking systems More easing of these restrictions appears likely Since the widespread bank failure of the 1920s and 1930s were in part attributable to the fact that many areas had too many banks state and federal authorities have exercised considerably more caution in granting charters to new banks and in authorizing existing banks to establish new branches More adequate inspection of commercial bank assets is now made by regulatory officials on both a state and federal level

Illiquidity of the System

The most fundamental changes have been those that have increased the ease with which banks can dispose of their assets in order to get additional reserves or currency

In the crisis of 1929–1933 temporary financial institutions were used to provide liquidity These were government corporations whose major function came to be to take over bank asets some good and some bad and give the banks money The Reconstruction Finance Corporation (RFC) had been established in 1929 to make temporary loans to bolster especially distressed industries particularly railroads It came however to be used primarily to make loans to commercial banks or to buy their preferred stock when their capital stock had been wiped out by assets losses Two other temporary organizations the Home Owners Loan Corporation and the Federal Farm Mortgage Corporation were organized by the federal government to buy the mortgages of house buyers and farmers from lending institutions in order to accomplish two things (1) to give liquidity to the assets of the lending institutions taking from them some of their most illiquid assets which might be almost worthless in the short run and giving them cash and (2) to ease the pressures on the borrowers many of whose loans were in default and many of whose properties would otherwise have been sold in foreclosure proceedings

These were *ad hoc* institutions which no longer exist. But their creation reflected a fundamental change in attitude and gave the United States the knowledge and experience to create similar organizations in emergency situations

Major changes have been made in the Federal Reserve Act, substantially increasing the powers of the Federal Reserve to act to provide needed liquidity in a time of economic decline Federal Reserve banks formerly could not lend reserves to a bank except on the basis of a highly restricted kind of collateral they may now lend against any collateral they deem acceptable They have been given the power to lower reserve requirements And they now have the power to set margin requirements on security purchases allowing them to discourage what they believe to be excessive speculation on the stock exchange without at the same time reducing the liquidity of the entire financial system

With the reforms, the people can demand currency from their banks and get it, and the banks can in turn count on the Federal Reserve to provide as much currency as needed

Public Confidence

All the preceding changes, of course increased the confidence of the public in the banking system But a more fundamental change in the direction of increasing public confidence was the establishment of a program of deposit insurance in commercial banks mutual savings banks and mutual savings and loan associations

Two new financial institutions, the Federal Deposit Insurance Corporation (FDIC—for commercial and savings banks) and the Federal Savings and Loan Insurance Corporation (FSLIC) were established to provide insurance up to $5000 (now $10 000) on accounts at these institutions As might be expected the existence of deposit insurance has helped to assure that it is not needed since deposit insurance has enhanced the public's confidence in their accounts it has made less likely the bank runs which in the past were partly responsible for the bank failures

Probably as important as any of these changes in the financial system is the changed public attitude toward changes in the level of economic activity Few regard a severe depression as possible today, it is accepted that the federal government has responsibility for acting to prevent or put an end to recessions before they succeed in materially affecting the assets held by lending institutions

III FINANCIAL POLICY

Reflecting upon his experiences during the depression and financial collapse of 1929–1933 Herbert Hoover once described the banking system as the weakest link in the entire economic system. It is now one of the strongest.

The reforms made in the financial system and especially in the banking system since the bank closings of 1933 have today made it reasonable to think about employing financial policy to combat changes in the level of economic activity And the changes in the attitudes of public officials the financial community, and the general public, whereby social responsibility is today generally accepted for problems once left entirely to the individual for solution has created an environment conducive to antirecession financial policy

Actually financial policy has come into its own only fairly recently After the New Deal reforms, there lingered a good deal of suspicion of the banking community including the Federal Reserve. Until about 1938 New Deal efforts to raise the level of economic activity consisted primarily not of the use of financial or fiscal policy but of attempts to make institutional changes in the economy[2] During World War II stabilization objectives assumed a secondary priority, and financial policy was not employed After World War II financial policy was directed at the single objective of maintaining a policy of constantly low interest rates for reasons to be noted in a later chapter It was not until 1951 when this policy was abandoned, that financial policy became available as an antirecession tool.

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[2] Beside the banking reforms these changes included the establishment of such bodies as the Securities and Exchange Commission, the National Industrial Recovery Administration, the National Labor Relations Board, and others. Some of these changes, such as the banking reforms, are viewed sympathetically with the hindsight of historians others, such as the NIRA, established by the National Recovery Act which was later declared unconstitutional are viewed with much less favor

However as you will see it is one thing to say that financial policy is available as an antirecession tool it is another to say that it works

How Financial Policy Is Supposed to Work

Financial policy is defined as efforts on the part of central authorities to induce the creation of more financial instruments (or in other circumstances to restrain their creation) by altering the terms on which financial transactions take place mainly by altering interest rates[3] The major responsibility for exercise of financial policy lies with the Federal Reserve which alters interest rates by altering the size of the money supply this branch of financial policy is called monetary policy because of its association with the money system[4]

In Chapter 11 you saw that the Federal Reserve through open market buying and selling of government promises can determine the amount of reserves available to commercial banks and that this power, together with the Federal Reserve s power to determine required reserve ratios determines the size of the money supply You also saw that the size of the money supply is an important determinant of the effective rates of interest applying on financial transactions When the Federal Reserve buys government promises in the open market thereby providing the banks with more reserves and when the Federal Reserve lowers reserve requirements the money supply increases and these same transactions lower existing interest rates Transactions that reduce the money supply (or hold it constant in a growing economy) also raise interest rates

In a recession the Federal Reserve exercises these powers in an expansional direction thereby lowering interest rates The presumption is that lower interest rates will induce increases in borrowing mainly by business firms for investment purposes but also by house buyers (whose purchases, you will recall, are also officially counted as investment), and by state and local governments It was once believed but is not now widely accepted that the lower interest rates—by affecting the benefits of saving—would also induce the people to save less and hence to take more product

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[3] Other terms that can be influenced by financial policy include for household loans the sizes of down payments and of monthly payments, and for business loans the amount and quality of collateral the size of the checking account balance maintained by the borrower and other more technical requirements.

[4] It is not possible for this text to go into most of the other less important branches of financial policy such as these The Treasury Department of the federal government believes that it can influence the structure of interest rates as between short term intermediate term and long term interest rates by altering the maturity structure of the public debt through "debt management' , Congress the Federal Housing Administration, and the Veterans Administration, through their mortgage insurance and guarantee programs can influence the interest rates and other borrowing terms affecting real estate loans and the Small Business Administration, the Commodity Credit Corporation, and other government lenders affect the availability of credit to others.

The major effect is believed to be upon investment. If a business firm is contemplating an investment project that, it is believed, will yield a 6 percent return, it will be unlikely to make the investment so long as interest rates exceed 6 percent. A reduction in interest rates to 5 percent or less would encourage this investment.

Reasons for Lack of Widespread Faith in Financial Policy

However, most economists believe that the antirecession effects of financial policy are either extremely slight or nil.[5]

To see why this is so, let us examine the motives and borrowing practices of each of the major borrowing groups in the United States, except for the federal government, whose decision to borrow reflects current fiscal policy.

CONSUMER SPENDING. It seems to be true from historical experience that consumer borrowing to purchase automobiles, appliances, and the like, is unrelated to interest rates. Most consumers, in fact, seem *unaware of the true interest rate they are paying on installment payment* loans. Hence financial policy of the sort that relies on changes in interest rates does not seem to affect the people, either as savers or as buyers, at all.

Rather than *basing their borrowing decisions on interest rates,* consumers are apparently most influenced by the size of the down payment, and the size of the monthly payment. With any given down payment and monthly payment, a rise in the interest rate will lengthen the repayment period, for example from twenty-four months to thirty months. Such a lengthening of the repayment period seems to have little if any effect on consumer borrowing.

The most success in controlling the amount of consumer borrowing has been achieved with direct financial controls. Under the so-called Regulation W, last in effect during the Korean conflict, the Board of Governors of the Federal Reserve could set minimum down payment and maximum maturity (repayment period) requirements, the manipulation of which could significantly affect consumer spending.

HOUSE BUYING. On the other hand, the amount of residential construction seems to be materially affected by the interest rate, because interest is a fairly large percentage of the cost of building or buying a house. However, when people's incomes decline and the outlook becomes more dim, as is the case in a recession, they are less likely to enter into new agreements to purchase houses.

MUNICIPAL GOVERNMENT. Many municipal governments are prohibited by their own laws from selling new bonds when interest rates exceed a certain level for example 3 percent The importance of such restrictions is that new bond issues such as school bonds which have been approved by the voters may not take effect immediately after the vote Authorities may have to wait until interest rates are lower before the bonds are actually issued Hence it has been widely accepted that school districts and other municipal government units borrow more and spend more when interest rates are low than when they are high

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[5] As you will see in Chapter 19, there is much *more widespread belief,* although far from universal, that financial policy can be effective against inflation.

However the evidence is not entirely clear Recent research has suggested that many municipalities when they are prevented from issuing bonds by high prevailing interest rates will instead issue short term notes (whose interest rates are not covered by the law) and go ahead with construction immediately The short term notes are reissued again and again until interest rates fall enough for the bonds to be issued This practice if it is widespread would mean that changes in interest rates have little if any effect on the issue of financial instruments by municipal governments

BUSINESS INVESTMENT If monetary policy is to have any really significant counterrecession effects it must have some effect upon business investment whatever may be the reaction of other borrowers And the assumptions lying behind interest rate policy imply that investment will be affected Yet statistical researchers have generally been unable to find consistent significant relationships between the level of investment and the rate of interest This does not mean that such a relationship does not exist so many things are happening at the same time when the investment level changes that it is extremely difficult to isolate causes and effects But it is widely doubted on theoretical as well as statistical grounds that there is a significant effect

The probable effects would depend to some extent on the nature of the investment If the business is pondering an expansion of inventory for instance interest rates would be expected to have little effect Changes in the interest rate make relatively little difference in the total cost of a short term investment The decision to expand inventories is much more likely to be shaped by the existing market for product (not a very attractive market during a recession) than by interest rates

If the business is pondering an expansion of long lived productive facilities its decision will depend on long term factors such as expected future market, international trading changes population growth and the like rather than on temporary market factors Changes in interest rates may affect the timing of such long term investment when interest rates are high and increase it when interest rates are low But research indicates that interest rates are not too important in the investment decision of large corporations which do most of the investing for two reasons (1) over two thirds of the investment done today by corporations is financed 'internally,' that is using retained earnings and depreciation and de cisions on the use of 'internal funds" do not seem to be related to the interest rate and (2) since the rapid rate of technological progress makes the danger of obsolescence of equipment a real one, many firms have a policy of investing only where they can foresee a new facility paying for itself in three to five years, the high rate of return on such investments (20 percent to 33⅓ percent) makes interest rate changes between 4 per cent and 5 percent or 5 percent and 6 percent almost irrelevant

This last point suggests the major weakness of financial policy Most critics of this type of policy believe that interest rate changes, if large enough could certainly influence the level of economic activity But the actual range of interest rates over the American business cycle is fairly small The prime rate, the low interest rate offered by commercial banks to their largest and most important borrowers, varies only between about 3 percent and 5 percent[6] The real issue is whether investment is sensitive to interest rate changes over this narrow range The consensus seems to be that it is not

Financial Policy and Fiscal Policy

While basic reliance in combating cyclical unemployment and recession must be placed on fiscal policy, financial policy is always employed in a complementary role The two types of policies have similar objectives and (if both are successful) similar results

Both types of policy attempt to fill the gap between the amount the people want to save at full employment levels of economic activity and the amount of financial instruments actually issued When the government employs fiscal policy, it fills this gap by creating new financial instruments The solution is a direct one there is not enough creation of new financial instruments so the government has a deficit budget and issues new promises

The objective of financial policy is to fill this gap by inducing borrowers other than the federal government, primarily businesses to create new financial instruments The solution is an indirect one the Federal Reserve does not create new financial instruments but tries to induce others to do so

Both types of policy have one important feature in common They are both broad general impersonal ways of influencing the level of economic activity No central choice is made about what additional product will be taken or who will take more product no one decides which borrowers will borrow more or for what purpose The decisions of spenders are influenced but the spenders may not even relate their decisions to any official policy This type of broad impersonal policy as you will see in Chapter 19 stands in direct contrast with direct controls" such as production quotas price controls rationing and the consumer credit controls already mentioned

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[6] There are a number of reasons for this small range One major one is that interest rates besides affecting borrowing decisions also happen to affect how much income is received by owners of financial instruments mainly people in upper income groups The high interest rates necessary in some periods would raise complaints about the income redistribution involved reduction in other periods would be accompanied by similar pressures from other groups. *Another reason lies in the* fact that interest rate changes also mean changes in the market values of bonds and certain other financial instruments, wide changes in interest rates can mean intolerably large capital gains and losses for security owners

If most economists agree that financial policy makes a small contribution if any to raising the level of economic activity during a recession why do we bother? Why have financial policy at all?

Expansional financial policy during a recession it should be recalled is necessary to provide sufficient liquidity in the financial system to avoid the possibility of financial panic regardless of what the interest rate effects may be thought to be Moreover many who believe that financial policy does not influence the level of economic activity do believe that it creates conditions necessary if other forces are to bring about full recovery "You can lead a horse to water but you can't make him drink" but he can't drink if you don't lead him to water

And finally, the Federal Reserve must somehow determine what is the appropriate reserve requirement and what is the appropriate amount of reserves for the commercial banks to own It does not make these decisions by drawing numbers from hats or by rolling dice, it must make them in accordance with what it believes will be most beneficial for the economy as a whole, even though the benefits may be indeed small.

18

THE LEVEL OF PRICES

Instability for the economy can appear, as you have seen because while the people may *want* to save an amount different from the amount of savings actually created, they cannot do so And they respond to such a situation by taking a different amount of product than they otherwise would have taken Recession and cyclical unemployment appear when the people cannot obtain as much savings as they want, and react by taking less product Recovery from recession comes about when the people are provided *more* savings than they want (than they want that is at the recession level of economic activity), and react by taking more product.

An excess of desired savings over actual creation of financial instruments then has a general contractional effect on the economy And an excess of actual creation of financial instruments over desired savings has an expansional effect With full employment a contractional effect is considered bad, it means recession With recession conditions an expansional effect is considered good, it means recovery But what about an expansional effect when there is already full employment? What happens when the people together with the other three sectors try to take more product than the economy can produce under ordinary conditions?

Recovery from a recession comes about when the four sectors try to take more product than is currently being produced Because they do so sellers' inventories are depleted supplies run short and orders are unfulfilled Production groups respond by rehiring laid-off workers reopening shut down facilities increasing the work week and so on thus raising the level of economic activity But when the people together with the other three sectors try to take more product than is currently being produced, and no more in fact *can* be produced (without institutional changes such as might take place during wartime), production groups cannot respond by expanding production Instead they raise prices

Administrators of production groups need not raise prices out of greediness or opportunism It is not just a matter of charging "what the traffic will bear" When a single firm finds it cannot increase production with its existing manpower and facilities but there is an abundance of orders and potential sales they ordinarily *try* to expand their production To do so they try to hire more workers for one thing With no ready "pool" of unemployed workers upon which to draw they must hire workers away from other jobs, and to do so often requires offering to pay them more They must compete for a supply of raw materials and ingredients and for capital goods all products that already have willing buyers, and they together with other production groups bid up the prices of these materials Even firms not trying to expand will have to pay more for services and ingredients

Moreover it is a basic principle of economics that expansion of production will begin with the use of the most efficient and best adapted resources and then proceed to the less efficient and less well adapted You build your first factory in the best spot for a factory of its kind, you cannot build the second factory on the same site, and hence (chances are) it will be less efficient Another way of stating the same rule is to say that resources whose use is unprofitable at low prices may be profitable at high prices Iron ore miners will not find it profitable to go after the less rich and/or less accessible veins unless the price of ore rises The very act of expanding production is likely to result in higher costs for each unit of product This is why, even during recovery from recession or depression, there is typically some slight increase in prices even when resources are still less than fully employed

This chapter is concerned with the subject of the price level, and what forces might bring changes in it In the economy of the sixties such a discussion must emphasize "inflation," the general increase of prices, rather than "deflation," the general reduction of them While recessions have not disappeared as problems facing the postwar economy, and while the questions of chronic unemployment and a lagging growth rate have become important in recent years, the overriding concern of postwar aggregate economics seems to have been inflation The "cost of living" has been the center of attention of the economist, the public servant, and the man in the street

There is a widespread consensus that inflation is bad Yet there is a good deal of misunderstanding about exactly what inflation is how it is measured, and what its effects are The first section of this chapter, then, will take a close look at the concept of inflation, and will examine the recent history of the price level

There is, moreover, no substantial agreement on *why* inflation is bad There are certainly some important disadvantages of inflation, which objective and informed people can agree upon But many oppose inflation for reasons based on misunderstanding of what it is and what its effects are Section II, then will ask the question, "Why the concern?"

Finally in section III, a more detailed examination will be made of what explanation can be given for increases in the price level You have already seen in this chapter that increases in the price level can result from an excess of actual savings created over savings desired by the people at a full employment level of economic activity In section III, you will see, however that not all inflation results from overcreation of financial instruments relative to the full employment propensity to save—that there are several kinds of inflation each one with a different set of implications

Chapter 19 will take up the problems of what can be done about inflation through government and Federal Reserve action

I INFLATION CONCEPT AND MEASUREMENT

Inflation seems like a fairly simple matter prices rise It is in fact not nearly so simple

A decline in the level of economic activity is a highly concrete phenomenon Men are unemployed, factories are closed, and less product is created and taken By contrast inflation is an abstract concept It deals with *average* changes in prices The fact that the prices of some products are rising while the vast majority are not, does not mean that there is inflation If the price of food or of housing or of appliances increases, other prices may be declining

In fact (and this is important), changes in the structure of prices —some increasing, others declining, others remaining unchanged—are to be expected at almost any time If such changes did not occur there would be real reason for concern, for these changes reflect a continuing process of changes *in technology, in types of products and in the preferences of* buyers *Some* prices *should* rise at any given time Inflation exists only when there is a *general* increase in prices But how general is "general"? Must *all* prices increase, or merely a majority of prices?

The Meaning of Inflation

Most people accept as a definition of inflation that the prices of product are increasing *on the average* This means that there could be a rise in the average level of prices even if only a few products increased in price, if the products were important enough, or if they increased in price by a sufficiently large amount. An increase in the price of shoe polish or colored pencils would not be as important as an increase in the price of milk or automobiles To determine whether there is in fact an increase in the average level of prices it would be necessary to take account of the price at which every single buying transaction took place (or accomplish the same thing by statistical sampling)

It was once popular to regard inflation as a decline in the purchasing power of the dollar Today however it is properly realized that changes in the value of a dollar depend on what you buy and that as prices change at different rates the purchasing power of the dollar changes in varying ways for different persons or businesses Hence while inflation may be in general defined as an increase in the average level of all prices no one tries to measure the price level Studies are made of the changes in prices of particular sets of products such as consumer product wholesale *product or new construction*

The Conceptual Problem

There is one fundamental conceptual or logical problem involved in the definition of inflation a problem that (you will see) disturbs those who try to measure price level changes It is not however fundamentally a measurement problem, but a more basic difficulty in the definition or meaning of inflation

If one year you took account of the prices at which everything (or everything within some category) was purchased and the quantities purchased and if the next year exactly the same quantities were purchased you could measure the average change in the price level But in practice you will find that exactly the same products would never be purchased two years in a row You would find that buyers would purchase more of some products in the second year than in the first and less of others You might find that some products would like the proverbial buggy whip have disappeared entirely and that others like television in the postwar years would have begun to appear for the first time A large percentage of products like automobiles appliances processed food and the like would still be there being purchased in perhaps roughly the same quantities but changed *qualitatively* through model changes new materials or new design

The basic question is this *How can you talk about an increase in prices of a set of products that is changing qualitatively?*

The problem posed here is much more fundamental than the technical one of determining (for instance) how much of an automobile price increase between two years reflects an improved model, and how much an actual price increase which ought to be reflected in a price level measure difficult as the problem is Price level comparisons between years are strictly correct only when the underlying economy—the products bought the quantities in which they are purchased and even the uses to which they are put—remain the same between the years being compared

An illustration should make this clear Suppose you move from a small New Hampshire village to Los Angeles and after you have settled some of your old New England friends ask you whether things cost more in southern California. You probably would have to answer that the things you bought were so different that you could not really make a comparison You could of course check around to find out how much it would cost you in Los Angeles to buy the same products you had purchased in New Hampshire but this result would not answer their question similarly you could try to determine how much it would have cost you back in New England to buy the same products now purchased in Los Angeles but this result too would not be useful Perhaps you could satisfy your friends curiosity by averaging the two figures but you would be aware that the comparison problem is not at heart a computational one but a more fundamental issue of how meaningful it is to speak of price level comparisons between the two cities

On the other hand if your move to Los Angeles had been from San Diego you probably would not have been troubled by the philosophical or logical problems involved and would have proceeded directly to get an answer to the question even though the same problems would have been there to a much lesser degree. You would have held—if challenged on the point—that your life in Los Angeles approximated closely enough your life in San Diego that price level comparisons could be made without question Even so if your computations told you that prices of things you bought were 1 percent or 2 percent higher or lower in Los Angeles than in San Diego your conclusion would probably have been that there is no significant difference between the two cities

The illustration has two important lessons for the usefulness of price level comparisons between years

1 Price level comparisons are most accurate or most valid between two succeeding years such as 1952 or 1953 as the time between the two years grows the comparisons become less useful and less meaningful Just as price comparisons between San Diego and Los Angeles are meaningful while those between a New Hampshire village and Los Angeles probably are not so price comparisons between 1952 and 1953 are meaningful while those between 1933 and 1953 probably are not.

2 However extremely small measured price level increases between two succeeding years or even months must be suspect Newspaper readers are used to front page headlines announcing cost of living reaches

all time high", the accompanying story which usually tells them that the Consumer's Price Index has increased by one tenth of 1 percent, should make them skeptical as to whether anything meaningful has happened at all

Measuring the Price Level—the Consumers' Price Index

As was noted, no real attempt is made to measure the price level, in recognition of the fact that prices of different products change at different rates and even in different directions, so that price level changes affect different buyers and sellers in different ways To the individual perhaps the most meaningful way of defining price level changes would be to take account of the changes in prices of the products he or his household buys If you took the trouble to compute your *own* price level you could tell whether you were better off (your income has increased more than the prices of products you buy) worse off (your income has increased less than prices of things you buy), or in about the same position as before If you are a person who spends a lot on electricity loves to chew gum and eat lots of chicken, your own "price level" would show a relatively small increase over the past few years If you were instead a meticulous person who went to the barbershop once a week, required a lot of medical care, and ate beefsteak, your price level would have risen considerably

Most people, of course, will not take the trouble to make such computations (and if they did, they would be faced with the same conceptual and measurement problems as the professional statisticians) Even if the people did make their own computations, no guide would be provided thereby for public policy, some sort of average price level computation would have to be made anyway These computations take the form of a "price index."

An "index" is a way of presenting percentage changes A certain year or period of several years is established as a 'base," and the average for the period is called 100 (that is 100 percent) If in the next year, the average increases by 20 percent, the index will be 120 Another increase of 20 percent in the next year would raise the index to 144 (20 percent of 120 is 24) An index does not show how 'high" or 'low" prices are, it shows by what percentage they have charged since the base year or period

The best known of the governmentally computed price level indices is the "Consumers' Price Index" (CPI), often called the cost-of living index, whose current base is the average of the years 1957–1959

In computing the CPI, the Bureau of Labor Statistics (BLS) follows roughly the same procedure that an individual might follow in constructing his own, personal price index—except that the averages do not apply to any particular household, but instead to a hypothetical kind of average household The products bought by this hypothetical household are the typical products bought—as determined by periodic studies—by city wage earner and clerical worker families that is by families living in the city not the country receiving an average income neither very low nor very high and having middle class tastes in housing food automobiles and appliances

Because the hypothetical family is an average one it behaves in a manner that would be odd for a real family It owns part of an air conditioner and part of a food freezer (because some people do and some people do not buy these appliances) it buys part of a car each year (because real people do not buy them every year) and it buys very habitually (because the studies of what people buy are taken only periodically not continuously) so that if beef went up to $5 00 a pound and eggs went down to 10 cents a dozen it would keep on buying beef and eggs in the same proportions as before These are not criticisms of the BLS methods which are the most sophisticated and accurate available They merely serve to illustrate a few principles concerning the computation of the CPI

The BLS very clearly states some of the limitations in using the CPI It is not an index of the price level—it cannot show what happens to prices generally nor at the other extreme can it be used by any single family to show what has happened to the prices of consumers goods weighted by the proportions in which middle-class urban families buy these goods

Yet the CPI is a very useful index Regardless of your buying habits or whether you are rich or poor or urban or rural if the CPI shows a significant increase in the price level it is doubtful that you can escape the effects of that increase since it is probable that you buy clothing food medical care fuel and other standard products counted Moreover while the CPI does not measure changes in the price level it is hard to think of many products whether producers goods or consumers goods whose price changes could fail to affect the CPI eventually

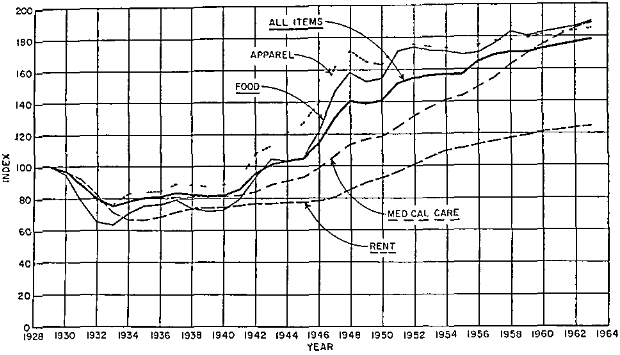
The CPI in Detail

The BLS publishes monthly figures for the CPI There are also separate monthly indices published for eight household expense categories food housing apparel transportation medical care personal care reading and recreation and other goods and services The movements of the CPI between 1929 and 1963 (with 1929 as base period) are shown in Figure 18 1 along with the changes in four of the major categories

It is clear from a glance at Figure 18 1 that the different categories change at different rates of increase or decrease The fact that the food category shows the highest index for 1963 (189 7) and that the rent cate

Figure 18 1

Consumer Price Index 1929–1963
(1929 = 100)



SOURCE Department of Labor

gory has the lowest (124 9) does not mean in any sense that the price of food is "higher" than the price of housing Food and housing are not the same product and to say that one had a "higher" price than the other would be nonsensical What is meant is that between 1929 and 1963, food prices rose the most, and rent the least But that statement applies only to the period 1929–1963 An examination of Figure 18 1 will reveal that, since World War II, medical costs have risen the most apparel the least, and food and rent have risen an amount almost exactly equal to the average of all items Using 1946 (rather than 1929) as base year, the indices for 1963 are all items 156 9, food, 156 6, rent, 154 0, apparel, 133 3, and medical 192 1 Medical care costs continue to rise the fastest today

Other important price indices prepared by government agencies include the index of prices paid by farmers used in preparing the parity ratio the index of wholesale prices (also broken down into groups of commodities) which is watched closely because it is more sensitive to change than retail prices which are included in the Consumers' Price Index and the "price deflators" (also broken into groups) which are computed by the Office of Business Economics in preparation of national income and product statistics, so that adjustment can be made as explained in Chapter 6 to show these statistics in "constant dollar" terms

Some More Problems

There are some important problems facing statisticians who try to follow the movements of price levels Most of them center around the conceptual problem mentioned earlier—that an attempt must be made to measure price level changes of a set of products changing in composition and quality

There is to begin with a problem in trying to define a product, and in determining its price How would you determine the price of "automobiles"? What is the representative automobile? How would you determine the real price, when the true market value of trade ins is taken into account?

It is even more difficult to determine the *changes* in automobile prices because it is difficult if not almost impossible to separate the changes in price per se from the different prices attached to qualitatively different products If some line of automobiles is introduced with a two inch longer wheelbase than the year before with twenty cubic inches of displacement added and ten more horsepower, and the price is $300 higher than last year's model how much has the price really *increased*, and how much of the $300 are you paying just to get more product? How can you say what the increase in automobile price has been since 1941, with such a different car today?

Some concern you will see is based on misunderstanding, but there are also valid reasons for calling inflation harmful, both on the basis of equity and on an analysis of possible economic consequences of rapidly rising prices

Concern Based on Misunderstanding

I INFLATION ROBS US ALL" The crudest kind of misunderstanding is to assume that because the prices of most products have risen, everyone can buy less than before Do not forget that in the aggregate and for any individual it is services that are traded for product Since World War II, despite regular price increases for most products, the amount of services that you would have to provide to get any product has gone consistently down An hour of labor time buys more and more every year

II INFLATION TAKES AWAY MY GAINS" There is a fallacy, easily fallen into of assuming that your own pay increases are based solely on merit and quality of work, and not on the same inflation that reduces the value of the dollar The increase in prices "robs" you of most of your well earned" raise It is hard for people to accept that their own pay increase may be part of the same phenomenon that brought price level increases One newspaper once ran an editorial trying to show how much the average man could buy with the wage increases earned since 1939, if there had been no inflation to reduce the value of that wage increase!

In the aggregate, a large part of the pay increases of the past twenty years was well earned indeed, reflecting as it did increases in productivity, but it was this "well earned" part that was *not* "stolen away" by inflation, and which accounted for the fact that rates of pay trebled while prices were only doubling

III "INFLATION HAS MADE ME POOR" Not only does the price level change but prices of individual products change, and at different rates and in opposite directions Such changes in price structure are important in an unplanned market economy such as in the United States, because they reflect real and significant underlying economic changes such as technology seasonal changes, and changes in buyers' needs and wants Price structure changes would occur (and we would want them to occur) even in the absence of inflation But when these changes occur at the same time the price level is changing it is easy to confuse the effects of the two

For instance if the egg farmer finds that prices of consumer product have risen by about 25 percent over the past dozen years, while the price of eggs has fallen by about 25 percent, he may feel that inflation has done him an injustice He may not stop to think that egg prices would have fallen, relative to other prices, even in the absence of inflation (and probably would have fallen more) And, as a matter of fact, despite the lower egg prices he may be better off than he was in 1949 The main reason egg prices are lower is that more eggs can be produced for any given investment in facilities and labor The price reduction represents an improvement in productivity rather than a decline in pay

Most relative changes of prices reflect changes in productivity or changes in the importance of different types of product rather than the effects of inflation But since different changes in price for different products may represent (or as in the case of the egg farmer, *seem* to represent) different changes in rates of pay and since they frequently take place at the same time as government indices are recording increases in the general price level it is inflation which is most often blamed

Even if all prices were to increase at precisely the same rates however, inflation would be accompanied by different rates of change of rates of pay because of productivity changes

Over the past dozen years or so the level of consumer prices has risen by about 25 percent, while rates of pay on the average have risen by just under 40 percent Anyone whose rate of pay has risen by less than 40 percent has found his *share* of total product declining, and those whose rates of pay have risen more than the average have found their shares increasing Moreover, anyone whose rate of pay has risen by less than 25 percent the rate of price increase, can actually take *less* product than he could a dozen years ago, his level of living has not only not kept pace with the average it has declined Anyone whose rate of pay has increased by more than 25 percent while his *share* may have declined, is nevertheless better off in absolute terms than he was before

There are in fact examples of each case Garment workers, textile workers, and retail clerks seem to have experienced little improvement in levels of living over the years since 1949, and in some cases, even have to take less product than they did then Steelworkers, automobile workers, and construction workers have experienced increases in rates of pay in excess of the 40 percent average, not only have their levels of living improved (as has almost everyone's), but they have improved more than the average There are of course many others whose pay increases have followed a path more closely approximating the average

It is important to note once again, however, that differential changes in rates of pay would occur even in the absence of changes in the general price level and, by and large, are not explained by inflation *But try* to tell a garment worker, whose pay has risen little if at all in the past ten years, and who finds that she must pay higher and higher prices for most of the items in her budget that she has not been "robbed by inflation"

That people generally may tend to blame inflation for their declining economic positions is an example of the often-observed tendency of human beings to try to find simple, single causes for hardships that they do not understand In the absence of inflation, the blame might, as it has in the past be put on 'Eastern bankers" on "cheap foreign labor," on taxes" or on any one of a number of catchword causes

Runaway Inflation

Increases in the price level raise in the minds of some the specter of hyperinflation' or "runaway inflation," such as occurred in Germany between the two world wars, or in the Confederacy during the Civil War In the German runaway inflation, for instance, the price level is estimated to have gone up by a factor of one trillion (1,000,000 000,000) between the beginning of World War I and 1924 and in the latter stages of the inflation prices and wages were increased daily, with workers trying to spend their pay as quickly as possible before it became worthless

Runaway inflation is a rare phenomenon, and should not be expected to develop out of even rapid wartime inflation It is a signal not so much of purely economic difficulties as of social disintegration and the inability of a government to govern It ordinarily is a reflection of the political disintegration brought about by a destructive war, and is more common among defeated than victorious powers In the absence of some cataclysmic upheaval it cannot occur in the United States

Some Ulterior Motives

Whether concern with inflation arises from misunderstanding or from real causes it can make many people feel that some injustice has been done them, and these tensions and feelings of inequity are themselves a major real reason to be concerned with price level increases If conflict and the sense of injustice are to be eradicated, it is necessary not only to attempt to limit price increases through policy, but also to stamp out illusory images of the effects and sources of price changes

No service is done, then by those who spread half truths and outright falsehoods in campaigning against inflation No reader of newspapers or magazines can have escaped the many public service" advertisements editorials, and even news stories describing the sources of and evils of inflation These messages often contain one or the other or both of the following assertions (1) government spending causes inflation, stop inflation by reducing government expenditures, or (2), union power causes inflation, stop inflation by weakening or destroying unions[1]

Possible sources of inflation will be discussed later in the chapter but here a few points may be noted Inflation may in fact be the result of too much spending but it is impossible to determine whose spending was excessive and whose was proper just as it is impossible to determine whether it was the first or the last drop of water that caused the cup to overflow There is good reason to believe that those who present this argument are often more concerned with reducing the level of government expenditures for various reasons of their own than with the price level Inflation may also be associated with excessive wage increases that is wage increases in excess of increases in productivity of labor but not all union members can be accused of getting inflationary wage increases as the experience of barbers waitresses garment workers leather workers and other will indicate nor can union members alone be accused of getting excessive wage increases, for high wage industries are also ordinarily high salary industries There is good reason for believing that many of those who argue for weaker unions on the grounds of opposing inflation are really more concerned with union power than with the price level

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[1] Some argue against 'government spending and deficit budgets in particular as inflationary even during recessions This argument was discussed in Chapter 16

This is not to say that it is impossible to justify arguments against government activities or union power Nor is to say that actions of either government or unions cannot initiate price level increases But as will be discussed later so can a number of possible actions by others Those who blame government or union actions for price level increases run the risk like the boy who cried wolf of being ignored when they are right because they are so often wrong

An extreme example of antiinflation messages was an advertisement quoted in part below published early in 1960 by America s Independent Electric Light and Power Companies

> A Good Place to *Start* to *Stop* INFLATION
>
> What family today isn t directly affected by one or more of the classic symptoms of inflation—the rising prices the shrinking dollar the pinch on income pensions and savings?
>
> Our lawmakers are squeezed between pleas for more federal spending and the responsibility of presenting the bill to the taxpayers And as always proposals to *cut* federal spending meet resistance although cutting spending is a direct way to block inflationary trends
>
> One example of nonessential spending is the outlay of tax money that goes to enlarge federal government s venture into the electric power business
>
> More government spending is quite unnecessary to the nation s power supply *The hundreds of independent electric* companies and their millions of investors are able and ready to fill the growing demand for electricity and *without* tapping the taxpayers

There may be valid reasons for opposing the spread of public power projects but the argument that public power is inflationary is not among them It is hard to see why a dollar spent by a public authority on hydroelectric dam projects or on steam generators should be inflationary while a dollar spent on the same type of expansion by private business firms should not be Both fallacious arguments of this advertisement that everyone is harmed by inflation and that government spending is necessarily inflationary while private spending is not, are widely believed by those with no axes to grind such people make easy prey for the sponsors of such public services messages whose motives were it not for the widespread confusion they both foment and exploit, would be transparently clear

Valid Concern over the Price Level

The fact that some misunderstand and others exploit the phenomenon called inflation does not mean that there are no valid reasons for concern If even through misunderstanding inflation creates a widespread sense of injustice done that sense of injustice itself is ample grounds for concern. There is reason to be troubled by both the real and the apparent effects of changes in the price level if both contribute to anxiety and dissatisfaction and become sources of conflict among the people.

Of the real effects giving rise to conflict and a sense of injustice the most important are that inflation moves at an uneven and unpredictable rate and that it does involve some real redistribution of income and wealth

1 UNEVEN RATES OF INCREASE. If price increases occurred at a constant rate over time people could take account of them in negotiating contracts (including contracts to work) or in making plans for the future. But Figure 18 1 shows that the price level moves in an erratic fashion The fact that there is uncertainty over what the price level will be at any given future date means that in a sense any future commitment involving a specific number of dollars and cents becomes something of a gamble.

As in any gamble there are winners and losers. If someone agrees to pay you some time in the future (you may have lent him money or signed a long term contract) and prices rise more than he and you had anticipated he will be the winner and you the loser for the dollars you are paid will have less value (in terms of product) than was anticipated when the contract was signed and presumably the dollars will be easier for him to come by Of course had prices risen less than he and you had anticipated or even declined (for there are winners and losers in deflation too) you will be the winner and he the loser In either case the loser may feel he has been robbed of something to which he was entitled and inflation may be seen as the culprit.

Even if the gains and losses attributable to inflation are insignificant or even nil people may be annoyed by the necessity of having to gamble, when all they want to do is sign a work contract, borrow or lend money, or make a sale or purchase involving future delivery of the goods

If price level increases make gambling and speculation an ordinary part of all economic activity and offer their own rewards which are as great as or superior to rewards from providing productive labor and ownership services, then energies are diverted away from more useful pursuits

Economist Fritz Machlup has written,

> One of the greatest economies of price level stability would consist in the redirection of effort from purely speculative activities and risk reducing hedging policies to actions designed to increase the productivity of resources[2]

II REDISTRIBUTION OF REAL INCOME Because inflation (or deflation) occurs at an unpredictable rate it is not ordinarily taken account of in contracts to provide services and products In the gamble that ensues it is not hard to identify winners and losers The following account is based *on the assumption that the price level increases, for deflation* the effects would be just the opposite

The biggest losers are those whose incomes are *fixed* in dollar terms or who hold fixed dollar value financial instruments, such as money, savings accounts and bonds This category includes most small savers, pensioners, and other people in relatively weak economic positions, but besides the often mentioned 'widows and orphans," it includes very rich bondholders and other absentee owners" and "rentiers'[3]

Other losers include those whose pay, while not fixed permanently, nonetheless is not quickly adjusted upward as the price level rises This group includes many pensioners, such as those on social security, whose benefits are periodically increased by legislative action to take account of price level changes (Those in private pension programs do not, of course, have their benefits so increased) Others whose pay lags include many, probably most, wage earners, especially government employees such as school teachers and private sector employees in relatively weak economic positions such as nurses farm workers, retail clerks, and such general categories as women and Negroes While there may be special hardships in some categories recent research has shown that wage earners as a whole lag behind *the rest of the economy less than had been believed, and that such redis-*

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[2] Statements in U S Congress Joint Economic Committee *Employment, Growth and Price Levels Hearings*, Part 9A (Washington, D C Government Printing Office 1959), pp 2323f

[3] It is often said that "creditors' as a group are losers in inflation. This would seem to imply that banks insurance companies and other financial intermediaries as prominent lenders *are among the major losers But these institutions,* which do in fact hold fixed dollar value claims also issue fixed dollar value claims as accounts and themselves have "hedged their bets" fairly well against inflation. It is the holders of the accounts—the ultimate "creditors"—who are the real losers, not the intermediaries.

tributive effects are slight Recall, however, that during price level changes, it is easy to mingle the redistributive effects actually due to inflation with those resulting from more basic economic changes such as technological improvements

Standing between the winners and losers are some—probably a majority perhaps a large one—whose pay and/or financial wealth *increases in dollar value at roughly the same rate as the price level rises.* Many wage and salary earners are in a position to insist on keeping up with the game In fact, some labor management contracts include a clause providing for increases or decreases in wages as the CPI rises and falls

Contrary to the widespread belief that when there is inflation everybody loses" as a matter of fact (unless there is a decline in economic activity) where there are losers there must be winners, and their winnings must equal the losers' losses But the winners' positions are often somewhat concealed

Not concealed, however, are the gains made by those in strategic positions in the economy, who demand greater shares of total product, and *whose demands sometimes actually initiate the price level increases* While these strategically placed persons include members of strong unions, they also include owners of net worth in strategically placed companies (often the same ones where strong unions operate), whose administrators have raised prices by more than the average, and have raised their own salaries while they were at it A popular example, though not an isolated one, is the steel industry, whose wage, price, profit and salary figures have shown redistribution in the favor of workers, administrators, and owners of net worth during periods of inflation

A concealed and often unaware winner in inflation may be the taxpayer When government pensions and salaries of public servants decline in real value as the price level rises, it is the taxpayer (whose taxes would have had to have been increased in order for these payments to have kept pace with the price level) who benefits

The biggest winners, however, are the owners of net worth, particularly of corporations As the product they sell rises in value and as their assets rise in value during a period of inflation, their obligations to wage earners and especially to their creditors do not Hence net worth rises *in value Since corporations often do not increase their dividends when* such profits appear, the profits take the form of "capital gains," and are hence not so obvious as the losses taken by savers and pensioners

Some people might regard these redistributive effects with favor After all, say some, why should any more be paid to 'absentee owners" of bonds, mortgages and the like, than just enough to make sure that such instruments will be held They argue that a dynamic, growing economy requires that there be some who are willing to take risks, and that the

Inflation and Other Economic Problems

In assessing the reasons for concern about inflation, note must be taken of the possibility that increases in the price level may be associated, either as cause or as effect with other and perhaps more fundamental economic problems

I EFFECTS ON ECONOMIC ACTIVITY It has already been seen that one hardship imposed by a rising or falling price level is that the uncertainty about the future created by such instability of prices makes ordinary economic transactions become speculative It is often argued, and probably with some truth, that the uncertainty created by random price changes may in fact discourage economic activity, because it increases the risk of loss, and that hence inflation may bring about a decline in the level of economic activity, or retard the economy's rate of growth Note that this argument would hold for either inflation or deflation

But it also seems reasonable to expect that rising price levels may have the opposite effect of quickening the pace of economic activity. Declining prices may be expected to induce people and business firms to postpone purchases, because future prices are expected to be lower, and rising prices may be expected to stimulate more immediate purchases, because buyers want to avoid paying even higher prices in the future Producers are probably more willing to expand facilities when there is a ready market, as there so often is in inflationary periods

It is probably impossible to test which of these effects is more powerful, because so many different factors are acting at the same time to influence the level of economic activity that it would be impossible to isolate the effect had by the rate of change of prices It may be noted, however, that throughout the twentieth century periods of prosperity in America have been been accompanied by either gradually or fairly rapidly rising prices, and that, generally speaking, reductions in the general level of prices have not occurred except during recessions and depressions

Finally, it has been argued that even if a rising price level stimulates economic activity, inflation is bad because the stimulus is "artificial" and the high level of economic activity thereby created is unsustainable By this line of reasoning, an increase in the price level must be prevented to avoid a recession There is no consensus among economists or anyone else, as will be seen again in Chapter 20, on the relationship among price stability, the level of economic activity, and the rate of economic growth

II INTERNATIONAL TRADE PROBLEMS Inflation has given some countries difficulty in their international trading relationships When the domestic price level rises faster than the price levels of other countries, that country's own people and businesses will be encouraged to buy more from abroad, while foreigners will be discouraged from buying that country's exports The result may be a "chronic balance of payments problem," Microeconomic reasoning, not covered in this volume, is necessary for an analysis of "structural unemployment" and "specific depressions."

Similarly, overcreation of financial instruments relative to the full employment propensity to save does not account for all increases in the price level. The type of inflation explained by this analysis is not, however, called cyclical inflation because inflation is not thought to be an ordinary part of the business cycle, nor are there obvious "cycles" of price level movements. Instead it is usually called demand inflation; the expression derives from the theory that this type of inflation occurs when buyers try to buy or *demand* more product than can be created under existing institutional conditions. There is "too much demand" whenever the amount of financial instruments actually created exceeds the full-employment desires of the people to acquire financial instruments.[5]

There are, however, other explanations for inflation, some of which will be discussed later. Here let it just be noted that for demand inflation to exist, there must first be full employment and capacity production. If the price level rises but there is substantial or even fairly high unemployment and excess industrial capacity, the rise in the price level cannot be attributed to "excess demand." Of the price level increases shown in Figure 18.1, only those of the World War II period (1941–1945) when the CPI rose from 62.9 to 76.9, an increase of about 20 percent) and the period immediately following (1945–1948, when the CPI rose from 76.9 to 101.8, an increase of almost 25 percent), together with a brief period at the outset of the Korean conflict (the 1950 CPI read 102.8, and in 1951 had risen to 111.0, an 8 percent increase in a single year), can with some justification be attributed to overcreation of financial instruments relative to the propensity to save and "too much spending."

How Demand Inflation is Initiated

The association of demand inflation with war suggests something about how it is initiated.

Like cyclical unemployment and recession, demand inflation can arise out of decisions on the part of any one of the four sectors to take more product. If businesses take more product, they will create more new financial instruments. If government takes more product, without changing tax receipts (or reduces taxes without cutting back on the amount of product taken), government deficits will be increased or surpluses reduced and hence more financial instruments will be created. If the rest of the world takes more net product, more financial instruments will be issued to Americans If any of these happen at full employment when the amount of financial instruments created *already* satisfies the people's propensity to save the price level will rise It will also rise if the people decide to take more product and hence decide that they do not want as much savings as they have been acquiring

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[5] In economics "demand" does not mean how much product buyers *want*; if it did, demand would always be "excessive," since everyone apparently always wants more. Instead it refers to how much buyers will buy, or try to buy, under specified conditions—such as full employment.

But for the United States the rest of the world sector is probably too small to account for significant price level increases and the people are ordinarily too consistent in their buying habits to account for a price level increase Besides the people's ability to try to spend more and to initiate demand inflation is restrained by the same built in stabilizers that help prevent severe depression Moreover in peacetime government activity rarely (in the modern world) accounts for initiation of inflation On the contrary in recent years federal government expenditures have risen proportionately less than total product has risen while the full-employment yields of existing tax rates have risen proportionately more than total product because of the progressive feature of the income tax

Hence in peacetime demand inflation is ordinarily associated with increases in investment—in attempts by business to acquire more productive facilities and inventories If investment does appear with major technological breakthroughs and dries up after each major breakthrough has been fully exploited the periods of boom are often associated with price level increases while the periods of drying up are associated with decline in the level of economic activity The instances of investment boom inflation however are rare and nonexistent in recent years

Wartime however is another story Then all four sectors can contribute to price level increases Foreign sources of supply of many important products are cut off but buyers still attempt to buy as much as before even though domestic sources usually are inadequate At the outset of war buyers in the private sector—meaning business and the people—often try to stock up on product they think will become scarce Attempts to hoard product that had been scarce during World War II account for much of the sudden price level spurt at the beginning of the Korean conflict.

But the main contributor to wartime inflation is of course government Not only does government attempt to buy considerably more product than in peacetime but it typically does not raise taxes by as much as expenditures Even though there is capacity production during wartime governments typically employ deficit budgets—precisely the opposite of accepted antiinflation policy During World War II for instance the public debt increased by about $200 billion The typical policy of wartime deficits is not necessarily unsound The reasons for it are discussed in the next chapter It is mentioned here only to indicate one of the major reasons that wartime is typically inflation time.

"Too Much Income"

In Chapter 12 you saw that 'not enough income" and "not enough money were commonly offered but incorrect explanations for cyclical unemployment Similarly demand inflation is often explained by various people as the result of too much income' or "too much money" The idea that inflation can result from "too much income" is patently false There is always the same amount of income created as product created, there cannot be more than enough income to buy all the product created, just as there cannot be insufficient income to buy *all the product created*

The idea that there can be "too much money," and that excessive *money creation is the major cause of inflation, is far more widely held,* and requires more extended examination

"Too Much Money"

There are a number of reasons why people commonly look to the size of the money supply for an explanation of increases in the price level Some of these explanations have a degree of truth in them

1 *History* In the past price levels have increased when major gold discoveries have increased the supply of money, or when irresponsible rulers have debased the coin of the realm" and paid for additional expenditures by coining more money It is not hard to see why the price level would increase under such circumstances Money is after all, a financial instrument representing a claim to product. In the days of these classical' inflations in the fifteenth, sixteenth, and seventeenth centuries money was virtually the only type of financial instrument widely held by the people These sudden increases in the size of the money supply represented *overcreation of financial instruments relative to the then existing propensity to save.* Too much money," then, is not the *general* explanation of a rising price level 'Too much *new* savings" is more general

2 *The Value of the Dollar* In inflation the "value of the dollar" in terms of product declines Hence, it is argued it must follow that there are more dollars An increase in the amount of dollars is associated with a decline in the value of dollars But an increase in the price level is also associated with a decline in the value (in terms of product) of bonds savings accounts insurance policies, and even fixed incomes Anything fixed in terms of dollars declines in value Does that mean that inflation is explained by too many fixed dollar value financial instruments and too many fixed incomes?

This explanation is really based on a confusion between dollars as a unit of measurement of value and dollars as a type of financial instrument representing a general claim to product. The confusion is between 'money" and "money's worth,' as discussed in Chapter 9.

3 *More Money Hence More Spending* It is widely believed, and was once accepted by economists that the more money people had, the more they would spend But historical evidence shows this intuition pleasing theory to be false There is no established statistical correlation between the size of the money supply and the level of prices

4 *Terminology* The association in many people's minds between the amount of money and the level of prices is encouraged by the use of such terms as 'monetary stability" to describe price level stability Such expressions refer to 'stability" in the *value* of money, not in the amount of money

5 *Monetary Theory* There is, however, a school of thought with wide acceptance among economists that the transactions that result in the creation of more money can also result in overcreation of financial instruments relative to the people's propensity to save and hence lead to increases in the price level There are two major types of such theory It must be pointed out that both theories are based on acceptance of the principle that demand inflation is explained by an excess of financial instruments created over the amount the people want to save at full employment, they do not conflict with the general analysis outlined in this chapter

One theory says that only through commercial bank money creating operations *can* the amount of financial instruments created exceed the amount the people want at full employment The assertion is based on the nature of money and the transactions through which it is created When people buy a bond, acquire a savings account, or in fact acquire any financial instrument other than money, they must give up money for it The transaction cannot take place unless there are willing holders Therefore, it is argued creators of financial instruments other than money cannot create more than the people want to hold If the people did not want to hold these instruments they could not be issued On the other hand, however, if a firm wants to invest, and borrows from a commercial bank, it is not necessary that anyone first have made a decision to save The bank simply accepts the firm's promise, and issues money to the firm When people go to work for the firm, they do so because they want to earn money, and wanting to earn money is no sign that they want to save

Hence only commercial banks goes the argument, make possible the overcreation of financial instruments relative to the full employment propensity to save

While this theory has many advocates it also has many critics, who attack it on two general grounds First, they say, not all transactions that involve money creation also involve new lending by commercial banks Money is also created when banks acquire and ' monetize" already existing promises, such as government and corporate bonds Hence there is no one to-one relationship between the size of the money supply and the creation of new financial instruments Second, the critics say that it *is* possible to have overcreation of financial instruments relative to the full employment propensity to save without money creation They accuse the theory of ascribing an unreal kind of step by-step operation to the economy, when in fact many transactions take place simultaneously The theory says that *first* the financial instruments are issued and *then* the money is spent But if firms in the aggregate decide to acquire more product, they usually try to hire the additional men (away from each other, thus bidding up wages) and/or order the new product from other firms (outbidding other firms) at the same time as the new instruments are issued The new financial instruments are issued and the price level increases at the same time In the *aggregate the increase in money paid to those who provide services goes* in part to buy the new financial instruments issued As people's pay increases, they use some of the increase to acquire the new financial instruments The saving is "voluntary," but the price level has risen

The second theory is the most widely held 'money" approach to the price level This theory is based on the reasoning that as the money supply increases other things being equal interest rates will fall If lower interest rates encourage an increase in investment, more new financial instruments will be created and the price level may rise Critics of this theory wonder whether interest rate changes at least within the range typical in America have much if any effect upon investment

There is no agreement that either hypothesis is valid or invalid They are both based as noted, on the fundamental theory attributing demand inflation to overcreation of financial instruments *and on that theory* there is very wide agreement

Why It Spreads

There is no difference between the reasoning concerning recession and the reasoning about inflation on why the instability spreads beyond the sector in which it was initiated In recession those whose pay is new financial savings have less to offer in exchange for consumer product, and so less consumer product can be created and taken In inflation those whose pay is new financial savings have more to offer in exchange for product and since no more consumer product can be created, prices are also bid up in that sector

How Great the Increase?

The concept of the multiplier appropriate to a decline in the level of economic activity is also appropriate to demand inflation In Chapter 13 you saw that any decline will continue until the amount the people want to save falls to a point at which it is equal with the amount they can save, and that the degree of decline can be estimated by taking the full-employment divergence between desired savings and actual savings created and multiplying it by the multiplier

Similarly the price level increase will continue until the amount the people want to save rises to a point at which it is equal to the amount of new financial instruments being created The amount of increase in total product in dollar terms is found by multiplying the same multiplier by the difference between the amount the people want to save (at full employment before the price increase) and the amount of new financial instruments being created

But in Chapter 13 you also saw that the decline may be even greater than the multiplier would imply because when the people take less product businessmen may once again revise their forecasts of future sales and cut back on investment once again Similarly in inflation the multiplier may underestimate the degree of price level increase If the price level rises, and if people believe that it will continue to rise they will want to hurry up and buy now, before prices rise still further, this attempt to *buy even more may force prices up still further Both* a *rising price level* and a decline in the level of economic activity tend to feed upon themselves"

Limitations of the Symmetry

Of course inflation and recession are not the same things nor even exact opposites of each other You have already seen that where recession is a concrete and easily identifiable phenomenon, inflation is abstract and elusive There are at least two other major differences between the analysis appropriate to inflation and that appropriate to recession

For one thing, when there is a recession what is usually called for is *recovery*—a *return* to high levels of economic activity But when there is inflation, the answer is not to return prices to their old levels To do so would involve deflation, which as you have seen creates many of the same difficulties as are caused by inflation Attention is directed to *stopping* inflation, not *reversing* it. Deflation after inflation is not similar to recovery after recession

Second, where there is a decline in the level of economic activity, it is not difficult to get consensus on policy to bring recovery because virtually any policy chosen will make some people better off, without making anyone else worse off By contrast, it is difficult to get consensus on policies to combat inflation, because almost all such policies seem to make some people worse off—they restrain someone from doing something—without *making anyone obviously better off* This *inflation policy dilemma* assumes prominence in Chapter 19.

Other Types of Inflation

Sometimes the price indices show an increase in the level of prices when there is less than full employment and less than full capacity output implying that something other than "excess demand" is responsible Moreover many economists believe that some price level increases even with full employment and capacity may be traced to nondemand origins

Some of the increases registered by price indices may be attributable to the construction of the indices themselves, rather than to the existence of a real increase in the general level of prices For instance, suppose cold weather conditions in the southeast and southwest lead to losses in orange crops, with consequent increases in orange and orange juice prices Because of the price increase, the people cut down on their purchases of orange products and substitute other products whose price has not risen, or perhaps whose price has declined The price indices record the price increase, but not the change in purchases The "weights," established by an earlier survey of buying habits, do not change with every price change The people, as buyers are more flexible than the indices themselves

But more often, the indicated price level increase has actually occurred The explanations for other types of inflation involve microeconomic reasoning, and are beyond the scope of this book But the major outlines can be indicated

INFLEXIBILITY OF PRICES Suppose the people want to buy more of one product, less of another They are not trying to spend any more than before, but are trying to spend their money in a different way Microeconomic theory says that one immediate result should be that the price of the first product will rise, as the people try to buy more when at first no more is available, and that the price of the second product will fall The average price level should change little if any

But suppose that while the price of the first product does rise, as expected, the price of the second does not fall The second product may be in one of the "administered price" areas of the economy, where administrators make an effort to have high stability of "list" prices Then prices would be rising in one area of the economy and constant in another The average price level would rise

Economist Charles L Schultze argues that the price level increases of 1955–1957, which occurred in the face of growing excess industrial capacity, were of this type, which is called demand shift inflation or sector inflation Schultze argues further that when the people try to buy less of the second product, the industry affected will probably have to keep pace with wages and salaries in the rest of the economy, and may even have to raise prices[6]

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[6] Charles L Schultze *Recent Inflation in the United States,* Joint Economic Committee Study Paper (Washington, D C *Government Printing Office, 1959)*

COST INFLATION The traditional explanation for inflation attributes the initiation of price level increases to demand—that is to decisions made by buyers rather than sellers The general explanation has been that buyers try to buy more product than can be created

But there is a growing body of opinion that price level increases can be initiated by sellers—sellers of services and sellers of product. Rather than demanding product, sellers demand higher pay—higher prices higher wages and higher profits

It has to be noted that demands for higher pay need not result in higher prices If through technological change it becomes possible to produce more product for the same amount of services used then those who provide services can be paid more with no increase in prices But if those who provide services demand and receive pay increases that exceed the increase in productivity prices will rise

It is argued by advocates of the cost inflation thesis that much of the inflation in post–World War II America, aside from the obviously war induced demand inflation of 1945–1948 and 1950–1951 is attributable to demands for higher pay on the part of providers of services—demands for pay increases that in the aggregate exceeded the increases in productivity in the economy

Many who say that there has been cost inflation of this sort say that it must have been permitted or encouraged by government policy They say that price increases and wage increases without prior decisions on the part of the people to buy more should result in reduction in sales and unemployment. But government, by maintaining a full-employment policy allows workers and administrators to receive price and pay increases without fear of unemployment. Critics of the view that cost push inflation requires government support say (once again) that it assumes an unreal step by-step operation of the economy where actually many things happen simultaneously If many people demand and get pay increases then buyers in the aggregate will have more money to spend and will spend more thus making unemployment less likely

More Problems Ahead

You have seen in this chapter that it is virtually impossible to provide a logically consistent definition of inflation that it is difficult to measure price level changes without considerable built-in error" and that there is widespread misunderstanding and still considerable uncertainty over the effects of increases in the price level. You have seen that there is even some disagreement over the causes of inflation

The difficulties raised by the topic of the price level do not end with this chapter You will next review some of the basic problems faced by policy makers whose task it is to arrest price level increases Before they can decide to combat inflation they must ascertain that there *is* inflation —no easy task They must determine what *type* of inflation exists because policies appropriate to combating one type of inflation may be extremely harmful if another type exists. And most difficult of all they must achieve popular consensus on actions that on their face, appear to do harm to one or more major groups in the American economy

19

POLICY AGAINST INFLATION

There is widespread agreement that the instruments of government policy should be used to combat any inflationary pressure that may appear in the economy. Virtually everyone agrees that a stable price level is one of the major objectives of economic policy. Even those mentioned in the preceding chapter as frequent "winners" in inflation ordinarily do not favor it. But this agreement is not easily translatable into consensus on any particular course of action at any particular time.

Chapter 18 suggested some of the reasons why consensus on anti-inflation policy is difficult to achieve. Inflation, which seems like a simple enough concept at first, becomes slippery when you try to grasp it. And there are unavoidable weaknesses in the ways in which we attempt to measure changes in the price level. Thus there is often room for disagreement over whether there really is inflation at any particular time. Complicating this already difficult problem is the fact that there is always a lag in the availability of price index data. At best, policy makers must refer to last month's figures. Policy makers sometimes have continued to fight inflation after the economy has already begun to decline into recession; such errors in timing can have serious consequences, increasing the severity of the new departure from stability.

A number of other factors complicate the process of deciding whether and how to combat inflation, and these will be discussed in the first section of this chapter. The remainder of the chapter will concentrate on three major steps of antiinflation policy—financial policy, fiscal policy, and direct controls.

I PROBLEM OF FORMULATING ANTIINFLATION POLICY

The first requisite of successful antiinflation policy is to recognize inflation This means both being aware of inflationary pressures when they do exist and knowing when they do not. The next problem is to determine *why the price level is rising or in other words, what type of inflation there is* The final problem is one of formulating and executing an appropriate policy or set of policies to bring the price level rise to a halt.

What Kind of Inflation?

Recognizing what kind of inflation there is at any given time is not simple. There are no clear-cut and universally applicable rules that will tell policy makers without question what factors are causing any particular price level increase. In every case, detailed examination of what individual *prices are rising or rising fastest, and careful investigation of* what pressures lie behind those particular price increases will be required But some general guidelines to recognizing types of inflation are available.

When the output of the economy is at capacity, and the price level rise is a particularly rapid one it is a good guess that the inflation is of *the demand type With demand inflation, everyone is likely to be highly* conscious of apparent shortages' of a number of types of product, and of the existence of a sellers' market."

If the price level is rising when there is substantially less than full employment of labor and there is excess industrial capacity, demand in*flation must be ruled out. This guideline is a very important one, because* around it have revolved some of the biggest controversies about inflation in the last two decades

The reason this guideline is important is that contractional financial and fiscal policies which would be proper policies in periods of demand *inflation, probably cannot halt other types of inflation, and further can* even cause unemployment and recession. The objective of contractional financial and fiscal policy is to get the four sectors to try to take less product than they are currently trying to take, if however, they are not really trying to buy more product than can be produced, discouraging them from buying will result in a decline in the level of economic activity

One controversy, for instance, involved the years 1955–1957 a number of economists did not believe that the price level increases of those three years resulted from "excess demand" But orthodox fiscal and (especially) financial policies were employed anyway Prices continued to rise, and in fact kept rising during the recession that followed in late 1957 and much of 1958

"Sectoral" or "demand-shift" inflation, it is said, is indicated by *in which no particular firms, industries or groups of individuals are* singled out for special attention Except in wartime, opposition has been strong to 'direct controls' This strong opposition presents a dilemma in the case of nondemand types of inflation How do you reconcile a preference for fiscal and financial policy—appropriate only in the case of demand inflation—with the existence of nondemand inflation?

There are a few on the other side of the ideological fence Some who favor more economic planning in the American economy, or more government intervention in union management collective bargaining, may favor direct controls, even in a period of demand inflation

Axes to Grind

The problem of choosing an effective and acceptable policy against inflation is certainly made no easier by those who, as mentioned in Chapter *18*, seize upon the opportunity provided by price level increases to grind their own axes against government expenditures in general and/or against unions The fact that these interests offer what often prove to be incorrect diagnoses of the reasons for price level increases makes it more difficult for policy makers to get acceptance for a correct kind of remedial action

An example was provided in 1962 Midwestern beef cattle farmers attempted to raise the prices received for their cattle by withholding cattle from the market The fact that their "withholding action" was successful was reflected in an increase in the Consumers' Price Index But some commentators publicly took the "reappearance of inflation" to be a sign that it was time for a cutback in government expenditures!

Achieving Consensus

Even if policy makers are sure that there is inflation, and even if *they know what type of inflation exists, and even if no one cares about* ideology and no one has axes to grind, there is still an extremely difficult problem facing those who must decide upon and execute antiinflation policy

It is relatively easy to get popular acceptance for policies that combat recession, at least when such policies are understood since they ordinarily involve increased income for some people and reduced income for no one But it is very difficult to get similar acceptance for antiinflation policy Properly conducted antiinflation policy should not reduce total product or income for the economy *as a whole*, but it often will (and will always *seem* to) reduce total product for someone or some group, or otherwise inflict some kind of penalty or restraint

If people are trying to buy more product than can be created—that is if there is demand inflation—then antiinflation policy must deprive someone of the ability to buy something Of course people could not have bought more product *than exists even in the absence of antiinflation policy* but effective policy restrains some people from even making the attempt If instead increases in profits wages and other pay are deemed excessive for price stability somewhere in the economy—that is if there is cost inflation—then antiinflation policy must prohibit someone from receiving as large a pay increase as he otherwise would have achieved Preventing such pay increases does not mean that the people as a whole must take less product but it ordinarily does mean that certain groups must take less product

Inflation in general means there is excessive something—excessive demand excessive profits excessive wage increases Effective remedies in general involve restraint which no one enjoys When general controls—fiscal and financial policy—are employed no one decides specifically who *will be restrained nor how When direct controls are used judgment must* be used to determine which groups are directly restrained—a fact which contributed to the unpopularity of such controls

The reasons for difficulty in achieving consensus on any given antiinflation policy underline some of the difficulties inherent in policy decisions *in general* In the field of welfare economics (a branch of economics in which attempts are made to define tests for determining whether a particular economic activity contributes to or detracts from the general welfare) there are two guiding principles The first is that any economic activity or any change that improves the well being of any person in his own estimation without at the same time detracting from the well being of any other persons in their own estimation improves general welfare Antirecession policy often fits this description The second is that it is *impossible to say* whether the general welfare is improved when $10 is taxed away from a millionaire and given to a starving man there is no scientific or logical basis upon which to make such a statement This is so because there is no way to measure count or compare well being among individuals Similarly there is no formal scientific or logical basis upon which to state that anti*inflation policy (if it penalizes someone in his own estimation) contributes* to the general good

The problem of policy makers is not to prove in a formal way that antiinflation policy is beneficial however It is to achieve consensus on measures that do appear to penalize someone You will see as the policy measures that can be employed are *reviewed in the following pages that* heavy reliance must be placed on two kinds of measures (1) those in which it is difficult to determine precisely *who* is being restrained or penalized and (2) those that go into effect more or less automatically without the necessity for conscious choice by a policy maker when there are inflationary pressures

II ANTIINFLATION FINANCIAL POLICY

In most countries responsibility for formation and execution of financial policy is predominantly that of the central bank, which in the United States is the Federal Reserve System, operating as a unit Because of its close link with the money system, financial policy administered by the Federal Reserve is commonly called monetary policy But the expression 'monetary policy" is a little misleading the amount of *money* is not the main consideration of monetary policy Instead, the rationale for monetary policy is the proposition that by controlling the amount of money in the economy, Federal Reserve officials also influence the rate of creation of new financial instruments[1]

When officials of the Federal Reserve believe that there is inflation of the demand type they exercise their powers in a contractional, restraining way selling government bonds on the open market to reduce the reserve accounts of member banks raising the required reserve ratio (that is reducing the multiple" of Chapter 11), and thereby reducing the money supply (In practice, all the Federal Reserve usually believes it needs to do in a growing economy with inflationary pressures, is to keep the money supply constant to exert a restraining influence To sharpen the points made in the discussion, in this chapter it is assumed that the Federal Reserve actually acts to reduce the money supply) Beside these actions which limit the size of the money supply, there may also be an increase in the "discount rate ' and perhaps an attempt to exercise 'moral suasion" through general announcements of the need for bankers to exercise care in making loans in light of current economic instability

By and large, then, the action taken by Federal Reserve officials during what they believe to be inflationary periods will have the effects of reducing the size of the money supply The Federal Reserve unquestionably has control over the money supply But, it might be asked, so what? Does this power mean that the Federal Reserve can influence the rate of creation of financial instruments, and hence the amount of product buyers attempt to buy?

There is far from universal agreement on the answer to this question Manipulation of the money supply has been the chief stock in trade of central banks for well over a century, but over this period of time official opinion and economic reasoning as to both whether and why restraint on

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[1] Economists once accepted as the orthodox view that it was the quantity of money in the economy that was most important in determining how much buyers spent—or tried to spend Today while a few economists still advocate variants of this so called quantity theory of money it is decidedly an unorthodox and minority view Nonetheless its intuitive appeal is so strong that this view is probably the one most commonly seen in journalistic and other lay discussions of inflation and of *monetary policy*

It is held that higher interest rates will discourage potential borrowers from creating and issuing new financial instruments and that if the increase in interest rates is sufficiently great the consequence will be price stabilization Note that the theory does not depend on limiting lending activity by commercial banks alone tight money policies raise interest rates throughout the economy—on short and long term bonds both private and government on loans by financial intermediaries both commercial banking and other, on consumer loans loans to house buyers on virtually all types of financial transactions

Federal Reserve activity influences interest rates within a maximum range of 3 percent or 4 percent that is interest rates charged to business firms wishing to invest in inventory or productive facilities rarely rise higher in times of tight money than 3 percent or 4 percent above the lowest rate charged in times of easy money Economists are not unanimous on whether changes in interest rates over this range have a significant effect upon borrowing for investment or consumption purposes

The probable effect of interest rate changes on borrowing by consumers house buyers businesses and government units has already been discussed in Chapter 18 Reviewing briefly we can note that (1) consumer spending on automobiles appliances and the like is virtually unaffected by changes in interest rates (2) house buyers seem likely to be influenced by changes in interest rates (3) short term investment decisions are likely to be little affected by interest rate changes since interest is a small fraction of the cost of such investment and since the immediate market (apparently a good market in time of inflationary boom) is the prime determinant of whether to invest (4) long term investment decisions are most likely to be significantly influenced by interest rate changes although this influence is mitigated to the extent that investment is financed internally from depreciation and retained earnings (which account for financing of roughly half of corporate investment) and (5) it is presently unclear whether municipal governments are really prevented from borrowing by their statutory bond interest rate ceilings or whether they finance capital improvements through short term notes renewed repeatedly until interest rates fall sufficiently for bonds to be issued

The question is thus left unanswered No one knows for sure whether interest rate changes over the relevant range have a significant effect upon borrowing and spending Reference to historical statistics are of little help In fact history shows that times of high interest rates have frequently been times of inflationary boom and that times of lowest interest rates have been times of depression but we certainly do not believe that high interest rates *cause* inflation or that low interest rates cause depression any more than we believe that storm windows and snow tires cause winter

Limiting Credit

As noted earlier, it was once widely held that there was some direct link between the amount of money—currency and checking accounts—in existence and the amount of product the four sectors try to take. By the time economists had become generally disenchanted with this view, another view—that monetary policy influenced spending decisions indirectly via the interest rate—had pretty much taken its place.

Skepticism concerning the interest rate view has been answered by still another explanation of the effectiveness of monetary policy—one linking the analysis of inflation as resulting from excessive creation of financial instruments with the special characteristics of commercial banks.

Recall the fundamental differences between commercial banks and other financial intermediaries. For intermediaries other than commercial banks to lend, there must first be a depositor, since borrowers want money and not the accounts that nonbank intermediaries can issue, such as savings accounts and pension rights. Similarly, anyone who wishes to issue a financial instrument directly to the people, without intermediation, must find a willing buyer who will give up money for the instrument. By contrast, when commercial banks lend, no one must first signify his willingness to hold a new instrument. If inflation results from an overcreation of financial instruments relative to the people's willingness to save, goes the argument, only commercial banks can account for inflation, because only they can create accounts—money—without a prior decision on the part of the people to save.

Contractional monetary policy limits the amount of checking accounts commercial banks can create, and hence limits the amount of promises they can hold as assets. If this means that their ability to make loans is limited, then it follows (say the adherents of this view) that monetary policy *can* limit the rate of creation of new financial instruments. If only commercial bank lending can be "excessive," and if you shut off commercial bank lending, then you can thereby stop "excessive lending."

This view of the effectiveness of monetary policy is based on the underlying theory that only commercial banks can be the source of "excessive lending." As you saw in the previous chapter, this view has its critics. It assumes that money creation and lending by banks are the same, but banks can make new loans without issuing additional money (when they *sell old bonds and make new loans, thereby changing the composition of their* assets), or can issue new money without making new loans (when they acquire and "monetize" existing promises). Moreover, it assumes an unreal step-by-step operation of the economy. "Excessive" lending could occur with no action by commercial banks simply if enough people and businesses holding money as assets could be convinced to hold some other financial instrument providing the money to potential spenders. The idea that there must be commercial bank action for there to be 'excessive' lending is unconvincing

Summary of Views on Antiinflation Monetary Policy

In order to understand and be prepared to evaluate anti inflation policies of central banks you must overcome the confusing influence of the long standing misnomer monetary policy' A more accurate and descriptive expression would be credit policy' for the objective of anti inflation monetary policy *is to restrict spending by restricting creation of new financial instruments.* Changes in the size of the money supply are a by product rather than an immediate objective of central bank credit restriction policy

Since in the last analysis demand inflation is thought to be the result of attempts to buy more product than can currently be created antiinflation policy must restrict someone s buying Antiinflation monetary policy is based on the implicit judgment that the first priority to product belongs to the cash buyer the household or business firm that can make its purchases out of current income or savings. Presumably, the next priority belongs to those *borrowers who present the best credentials to financial institutions* Those penalized' by *monetary policy are those* with the worst credit ratings, they stand last in line for product when there is excess demand

The two major theoretical approaches to central bank policy the excessive lending" view and the interest rate view, can easily be seen as two variations on the credit limitation theme. The first holds that credit is limited through decisions made by the lender because commercial banks' reserves are smaller they make fewer new loans. The interest rate doctrine holds that credit is limited through decisions made by the potential borrower because interest rates are higher he decides not to issue that new financial *instrument after all*

Evaluation of Antiinflation Monetary Policy

Few people believe that monetary policy is of much help in fighting a recession or depression, many more believe however that monetary policy has some degree of effectiveness against inflation The reason is that the monetary *tools of expansion that might be employed to fight a decline in the level of economic activity are permissive in nature,* what the Federal Reserve does can allow but not force an increase in lending and money creation On the other hand, the monetary tools of restraint that are employed in fighting inflation are restrictive in nature, there is no doubt at all that the Federal

Reserve can limit expansion of the money supply and the volume of bank assets

The only doubt concerns whether limiting the money supply and commercial banks assets actually limits credit and thereby spending

Financial policy is attractive to many people because it falls in the category of broad general impersonal controls of the economy The Federal Reserve does not say that this firm or that individual or even any particular industry is to be denied credit It simply says that credit is to be limited, and allows the 'impersonal forces' of the financial market to determine on whom the penalty falls This is not to say that the effects of monetary policy might not be felt by particular groups As has been noted, changes in interest rates or in the availability of credit probably do not affect all kinds of borrowers to the same degree

In fact, it is as hard to get unanimous consensus on antiinflationary financial policy as it is on any other type of restrictive policy It is easy to predict which voices will be raised in complaint when money gets tight"—those representing or purporting to represent small businessmen and farmers There have been times, furthermore, when householders and house buyers have begun to feel the pressures of "tight money", and have, to defend themselves, successfully demanded expansional policies on the part of Congress, with respect to FHA and GI housing loans

No group, it appears, willingly accepts restraint on its activities Monetary policy—if successful—has the advantage that most of its effects are not obvious In fact as you have seen, the effects are so well concealed that it is unresolved whether there are any significant effects at all[3]

If broad, general, impersonal controls are to be used, there are some political advantages in employing financial policy rather than fiscal policy As will be seen shortly, antiinflation fiscal policy involves government budget surpluses While people often express a willingness to reduce the public debt (as government surpluses would do), the only way this could be done would be to increase taxes or to cut back on the services provided by government—and neither choice has shown much political appeal

Moreover, monetary policy decisions can ordinarily be made with greater dispatch—sometimes months sooner—than can fiscal policy decisions by Congress, whenever the appropriate fiscal policy would require congressional action

The fact that most financial policy decisions are made by the Board of Governors of the Federal Reserve—a nonelected, almost autonomous group—provides another "advantage" for financial policy over fiscal policy period—World War II—with considerably more flexibility and power It had a sizable portfolio of government promises which it could sell on the open market it had the power to change reserve requirements and it had selective credit control over stock speculation But from March 1942 until March 1951 the Federal Reserve abandoned use of these tools in any conventional anti inflation policy Instead its powers were used to keep the market prices of government promises high and the interest rates low—a task easily accomplished through open market operations The Federal Reserve simply offered to buy any and all government promises presented to it at preset pegged prices

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[3] If there might be no real effects, why should farmers, small businessmen, house buyers etc., complain? Because they are not happy to pay higher interest rates regardless of whether the higher rates prevent them from borrowing and spending

This policy especially as it was carried forward into the postwar years has been subjected to considerable criticism Its objectives were simple such a large public debt was a new experience and it was thought that if market values of government bonds began to fall slightly holders of them would try to dispose of them quickly thus possibly precipitating a collapse in the market values of government bonds such as had indeed taken place shortly after World War I It was thought that such a collapse would be embarrassing to the government of the United States and unfair to those who had bought the securities during wartime when interest rates were low on the faith that their values would not fall

During World War II approximately half of government expenditures were financed by selling promises (the reasons will be discussed later in the chapter) To the inflationary pressure resulting from such a massive creation of new savings was added the fact that commercial banks were *developing large excess reserves and could lend virtually at will Banks* purchased billions of dollars worth of government bonds knowing that the Federal Reserve s pegging policy assured a guaranteed market should they ever need reserves The nation was forced to rely not on fiscal or monetary policy but on direct controls to govern the price level

Some of these direct controls were administered by the Federal Reserve itself as will be discussed below

After World War II ended most of the direct controls were abolished Yet the Federal Reserve continued its pegging policy It was increasingly clear that the Federal Reserve did so over its own protests at the insistence of the Treasury Department

With the outbreak of the Korean conflict in 1950 strong inflationary pressures again became apparent—at first because of attempts at hoarding by individuals and business then later because of a large and rapid rearmament program The American public and the world were soon treated to the spectacle of another kind of hostilities—the war of nerves and words between the Treasury Department and the Federal Reserve The Federal Reserve haltingly began action to increase interest rates The Treasury announced refunding operations based on fixed low interest rates

When the smoke had cleared, the Federal Reserve had won an almost complete victory in the embarrassing battle In an agreement which has come to be known as the *Accord of 1951, the Federal Reserve became free to follow* a monetary policy of its own choosing, subject only to a requirement that it act to prevent "disorder" in the government securities market Since 1951 the Treasury and the Federal Reserve have worked quite closely together No open conflict has appeared between the economic policies of the administration and of the Federal Reserve

Until 1951 the Federal Reserve had had inadequate powers, operated in depression, and been saddled with a pegging policy It had never, its supporters claimed, had an opportunity to demonstrate its anti inflation powers The Accord was hailed as a prelude to a "rebirth of monetary policy"

This policy was put to its most severe test in the inflation of 1955–1957 The year 1955 still stands as the all time high for Federal Reserve *sales of government bonds on the open market, and interest rates were* raised to the highest levels in a quarter century In the face of an increase in product of almost 25 percent, the money supply was held constant for three years Inflation was not arrested, however. In fact, prices continued to rise slightly even during the 1957–1958 recession, the most severe since the thirties

The results of the 1955–1957 attempt to curb inflation through vigorous contractional monetary policy are interpreted in different ways by different observers Defenders of the Federal Reserve and of monetary policy say that inflation would have been worse without antiinflation monetary policy, and that the Federal Reserve erred only in not going far enough (*It is likely, however, that it went as far as it could, without creating an extremely vocal reaction*)

Critics argued either that the episode showed the fundamental inability of the Federal Reserve to influence the price level or that the Federal Reserve was found to fail, because of its exercise of policy appropriate only to demand inflation when the price level increases (the critics said) had other explanations

III ANTIINFLATION FISCAL POLICY

Fiscal policy, like monetary policy, appeals to those who prefer a broad, general, and impersonal type of economic control—those who for ideological rather than technical economic reasons would limit the role of central authorities in determining *by design* how scarce economic resources are to be used

Fiscal policy and monetary policy are alike *in another respect* they share the objective of fighting inflation by bringing the volume of newly

How to Achieve Budget Surplus

The problem then is to reduce government expenditures for product taken collectively and for transfer payments and/or to increase tax receipts

Some antiinflationary bias is inherent in the federal government s tax and transfer system Income taxes are established on a graduated progressive basis under which tax *rates* increase as income increases That is as income rises in dollars and cents tax receipts in dollars and cents rise more than proportionately As a consequence there is a tendency for the federal *government to achieve a budget surplus whenever there are inflationary* pressures Further automatic transfer payments ordinarily decline during an inflationary boom Unemployment compensation and public assistance (relief) tend to decline as income rises

In short the same *built in stabilizers* that were described in Chapter 16 as automatically limiting a decline in the level of economic activity also work automatically to control the level of prices It might be noted that here is another instance in which antiinflation policy works without the need for establishing consensus—and perhaps only because there is no need for consensus (Moreover the income tax system acts as a built in stabilizer somewhat by accident Progression in the income tax system was first established for reasons having to do with an equitable distribution of tax burden *not for reasons having to do with stabilization objectives.*)

It is fortunate that there is a high degree of built in resistance to inflation because to accomplish the same reduction in transfer payments and increase in taxes through discretionary policy would be extremely difficult And there is difficulty whenever the built in stabilizers prove inadequate to control the rate of price level increase It is necessary under such circumstances to reduce government payments and/or to increase government tax receipts through open government action

At one time the agreed upon approach was to use public works projects to fight depression and then to cut back on government construction projects in inflationary periods One of the two major criticisms of this approach has been that construction activity should take place only when and if the projects are needed not necessarily in accord with the business cycle In that way we do not build schools courthouses and highways that are not needed on the one hand nor do we go without these facilities when they are needed on the other This theoretical objection is *supplemented by a practical one it just takes so long to begin construction* projects that public works may make no contribution to stability at all A year is probably a good average for the amount of time it takes between initial consideration of a public works project or cutback and its actual implementation in the field

More flexibility is provided when Congress can be bypassed When projects are already authorized (such as in military hardware or highways) the executive branch can often order a speed up or slowdown without further Congressional action

Economists today emphasize tax and transfer changes both because of the theoretical reasons mentioned above and because of the greater flexibility these changes could bring A tax rate change could be implemented the day after it was approved by Congress through increases in withholding taxes

Critics have pointed out that even this approach would take a long time Congressional consideration of tax rate changes is never a hurry up affair and any consideration of tax rate changes inevitably brings with it immense pressures on congressmen for preferential treatment for particular groups In the 1957–1958 recession proposals were made for reducing personal income tax rates across the board by giving relief to businesses and in other ways Tax rates were not cut Obviously the way a rate change is made makes an immense difference to different groups the same would be true perhaps to a greater degree in an inflationary period when the method of raising tax rates raises the question of who is to be penalized by antiinflation fiscal policy

There are frequent proposals that the executive branch be given some discretionary power over tax rates or that tax rates change automatically as certain statistical measures of economic activity (such as number of unemployed the consumer price index and so on) show the need The United Kingdom is experimenting with such a program today But it seems unlikely that the American Congress will in the foreseeable future give up its important constitutional power to determine tax rates

Who Is To Be Penalized?

The question of how a surplus should be achieved inevitably raises another problem who is to be penalized by antiinflation policy An effective program for combating demand inflation requires that someone who otherwise would have been able to take some product must be deprived of that ability Deciding how a surplus is to be achieved involves more than the questions of flexibility and timing discussed above it also involves choosing the victims

Penalties fall in a number of ways and it is difficult if not impossible to trace them out (and this is the beauty in the eyes of some of impersonal general controls such as fiscal policy) If taxes are to be increased those paying the higher taxes of course must generally forgo some product But the reduction in spending (recalling the 'multiplier effect) does not end with those who pay higher taxes Those from whom they would have purchased the product forgone also have less money to spend and these in turn by

This last section will examine each of these possible cases in turn, and at the same time identify the major types of direct controls that have been employed in the United States and those that have been most often proposed

Wartime Controls

As has been noted during World War II the conventional anti inflationary techniques of fiscal and monetary policy were abandoned even though the inflationary pressures of that time were par excellence of the demand type It was decided to control the price level through the use of direct controls the most important of which were price ceilings (through the Office of Price Administration) and wage ceilings (through the Wage Stabilization Board)

The imposition of price and wage controls left another problem In peacetime in the absence of controls an unplanned economy allocates resources by means of the price system Other things being equal, labor and ownership services go to the production groups that can pay most for them, and the groups that can pay the most turn out to be those who sell products the people are willing to pay the most for Products are sold to the people who are willing to pay the most for them The price system is what in the absence of controls, 'rations' services and products The imposition of wage and price controls required that some other means be devised for allocating resources One solution was coupon point rationing of goods in especially scarce supply Households could only buy as much shoes sugar, butter meat and gasoline as they were permitted to by the government, ration stamps or tokens were surrendered along with money when these scarce products were taken

A lot of people irrationally blamed rationing for shortages The shortages existed because the products were in scarce supply because the ingredients were needed for the war effort and/or because the war itself had cut off sources of supply Other people with little more sense thought that rationing was imposed to keep the people from using up strategic materials via consumption goods It was widely believed that without rationing the people would be using gasoline or rubber needed for the war effort The fact was that even without rationing consumers would have got no more of these goods Direct controls also determined which firms and industries could get ingredients and manpower and what they could be used for Rationing was employed only to make what was thought to be a fair distribution of what little consumer product was available

During World War II, and also to a more limited extent during the Korean conflict selective credit controls were administered by the Federal Reserve Board Recognizing that interest rates have little effect upon consumer buying and that even if they did the low interest rate policy of the Federal Reserve would encourage rather than discourage buying on time Congress authorized the Federal Reserve to administer controls that could set a minimum down payment and a maximum maturity on automobile appliance and home purchases

Cost Inflation

Cost inflation which has also been called administered price inflation wage push inflation and sellers inflation is a controversial topic among economists Some deny its existence Those who agree on its existence often differ on its explanation As a consequence their policy proposals differ

The frequent recommendation that cost inflation be combated with some type of direct control is based on the following kind of reasoning Some firms have a considerable degree of monopoly power and can raise prices without losing sales to a significant degree They refrain from charging what the traffic will bear not because they fear a declining market but only because they fear public opinion and possible antitrust action or new legislation These firms must bargain with strong unions When the unions demand wage increases in excess of increases in productivity in their industries prices of the products sold by such firms must rise Some go further and claim that monopolistic firms seize upon the opportunity presented by such wage demands to increase prices even more expecting the public and the government to blame the unions rather than the firms

This reasoning leads to recommendations of wage and/or price controls But advocates of such controls must face squarely the question of what criteria to use in controlling wages and prices

Do you simply freeze all prices at their present levels? Ban all price increases? No respectable economist would endorse such a proposal Some price increases are normal and healthy in any economy just as some price reductions are An attempt to freeze all prices at present levels would have serious and harmful consequences

Some commentators have proposed that wage increases (and presumably increases in pay for ownership services too) be limited in percentage terms to the increase in productivity for the industry involved If productivity had increased 1½ percent in the steel industry steelworkers and owners would be allowed a 1½ percent pay increase If productivity had not increased at all in the barbershop industry there would be no pay increase for barbers

On close examination this proposal turns out to be the same as the first one It would prevent the ordinary relative price changes that in an unplanned economy guide the use of resources Moreover it would mean that only those employed in industries with technological improvements (for example agriculture manufacturing) would ever get pay increases, *and that those employed in industries without significant technological* change (all those industries where mass production is inapplicable such as personal services education repair service and the like) would be condemned to fixed wages

A more sophisticated proposal is that wage increases (and again, presumably increases in pay for ownership services too) be limited in percentage terms to the annual average increase in productivity for *the economy as a whole* Thus if productivity had increased during the year 2 percent *for the entire economy* barbers could get a 2 percent increase in their pay and the price of haircuts would rise since productivity had remained level in this industry and electrical workers would get a 2 percent increase in pay even if productivity in their industry had increased 4 percent and the price of electrical products would decline The price *level* would not change, even though the price *structure* would change[4]

This more sophisticated proposal has its defects too It would allow wages to increase *at the same rate* throughout the economy It rests on the implicit assumption that the *existing* pattern of wage rates is necessarily a good one If everyone got a 2 percent pay increase the pattern of wages and ownership pay would not change Not everyone will agree however that *the existing pattern is a good one Some believe that there are underprivileged groups* such as hospital workers migrant farm workers and others, some believe too that there are overprivileged' groups whose recent gains make further increases unnecessary

The point is *not* that the existing pattern of pay is bad The point is that you cannot formulate any rule for deciding on wage increases without considering whether the effect on the distribution of income will be in your judgement good or bad Those who favor direct controls in order to prevent price level increases do not ordinarily think of their proposals as calling upon the government to decide what is the best distribution of product among the people but that is precisely what price and wage controls would do *The government can attempt to shut its eyes to the question* of equity by imposing upon itself narrowly technical criteria for administering controls But ignoring the income distribution consequences of direct controls does not mean that there would be no such consequences

These same problems which create what is probably an *insurmountable* hurdle for direct controls also plague to a lesser extent informal actions by government dealing with wage and price decisions

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[4] In the early 1960s this proposal was adopted by the federal government as part of its approach to union management negotiations A wage increase was described as noninflationary if it were equal to or less than the average annual increase in productivity for the economy as a whole Of course this rule was advisory only and could not be enforced for there were no direct wage and price controls.

Sectoral Inflation

Sectoral or "demand shift" inflation exists, it will be recalled, when prices rise in one sector of the economy because the people are trying to buy more product there but do not fall in other sectors despite the fact that the people are trying to buy less there

The possibility arises that direct controls could be used to limit the price increase in those sectors where there is 'excess demand"

There are difficulties with the use of direct controls for such purposes The most important one is this In an unplanned economy, when people want to buy more of one product and less of another it is quite appropriate that the price of the product wanted should rise It is this increase in price that attracts services into the industry to produce more of that product Similarly the reduction in price in the other industry should encourage services to leave that industry

Thus limiting the price increase in the sectors where demand is *"excessive" would indirectly prevent the economy from providing more of* some product that buyers have shown they want more of The economy would work just that less efficiently and effectively

The difficulty in sectoral inflation does not lie with the industry where buyers are trying to buy too much It lies in the other industries, where prices should have fallen, but have not, when buyers decided they wanted less No one has yet proposed a direct control that would force some firms to *reduce* prices from existing levels nor would such a proposal be likely to gain wide attention, much less acceptance Yet that would be what would be necessary to prevent sectoral inflation

Demand Inflation and Direct Credit Controls

There are those who would recommend direct controls even in a period of demand inflation The controls most commonly called for are selective *credit* controls, which would allow the Federal Reserve to limit credit for particular industries or products, and to impose once again, the down payment and maturity minima on consumer and home loans

The arguments presented most commonly are

1 Monetary policy as it exists today is *ineffective It does not limit* credit, or it does so only to a slight degree The way to be sure that credit is limited is to *command* banks not to make more than a certain amount of loans—or, even better, to tell them what they can make loans for and what they cannot

2 *Monetary* policy as it exists today is discriminatory It does not affect consumer buying at all It hurts farmers and small businessmen If discrimination is inevitable whenever credit is restricted, why not discrimi-

nate intentionally, in a desired direction? At least consumer buying should be cut down in proportion with other buying

These two statements (which incidentally contradict one another) are based on assumptions that have yet to be proven—*or* disproven In the absence of proof in one direction or the other, it seems clear that at least for the time being Americans will lean in the direction that their ideology and politics suggest—and that is not in the direction of direct controls

Other Uses of Direct Controls

Direct controls, especially selective credit controls are frequently proposed and sometimes used for purposes other than combating inflation Most often these uses and proposed uses involve especially attractive rates on loans for desired purposes when it is believed that without this type of government intervention the desired goal would not be accomplished

For instance, attractive interest rates are offered to firms willing to enter depressed areas, in rural electrification (through REA), to individuals wishing to buy or build houses (through FHA or GI financing), to those wanting to finance a college education (through a number of state plans or for preparation for certain vocations through the National Defense Education program), and to small businesses qualifying under Small Business Administration loan requirements

Other Ways to Fight Inflation

Because there are resistances to antiinflation policy, and especially because it is widely agreed that recent price level increases have nondemand origins (ruling out conventional antiinflation policy), there is much discussion today about finding new ways of controlling the price level

Price level stability cannot be considered in a vacuum Proposals to deal with price level increases in particular ways must take account of the effects of the proposed policies on the level of economic activity, and on the rate of growth of the American economy In the next chapter you will see that there is wide divergence of opinion on the extent of compatibility of the three goals of rapid growth high employment and price stability

One way government has already begun to deal with the price level is through becoming an interested party,' in an informal way, in wage and price decisions One set of proposals would formalize the government's involvement without going as far as establishing direct controls by creating government fact finding boards with subpoena power and considerable publicity to focus a spotlight of public scrutiny on potential 'wrongdoers"

Both cost inflation and sectoral inflation arise because of concentrations of economic power in large unions and in monopolistic firms Hence another proposed way of dealing with nondemand inflation is to weaken or break up either or both the large firms and strong unions Another possible way of providing such monopolists with greater price competition would be to expand trading relations with other countries

Finally it is often suggested that one way to prevent inflation is to have the economy grow faster If rates of pay tend to rise faster than productivity do not try to slow down the pay increases Increase the rate of technological change instead If the people are trying to buy more than the economy can produce do not cut down on the amount they try to buy Increase the amount the economy can produce instead More light will be shed on these appealing sounding proposals in the next chapter where the subject of economic growth is taken up

Conclusion

If the reader is left with the impression that our tools for combating inflation are not sharp ones he would be correct Monetary policy has not yet proven itself, nor has it successfully defended itself against charges of bad timing discrimination, and outright mistakes in judgement Fiscal policy is agreed to be effective in theory, but the political problems involved in raising taxes or in cutting back on government expenditures, and the practical problem of delay in administration have hobbled this potentially highly effective instrument Direct controls highly effective in wartime, cut against the grain of American ideology, seem unlikely to be enacted into law, and further seem unlikely to be enforceable even if enacted

Yet these tools are not entirely deficient Many do not agree that monetary policy is wholly ineffective American experience with antiinflation monetary policy is not great, and as that experience mounts the money managers are certain to become more skilled in the art Built in stabilizers in the federal budget are highly effective and responsive, the executive power to speed up or slow down already authorized projects makes discretionary fiscal policy not altogether inflexible And it seems highly likely that a serious inflation, whether brought on by a military crisis or not, would weaken political opposition to tax rate increases or direct controls Democracy frequently works slowly, but it usually does work

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ECONOMIC GROWTH: THE AGGREGATE VIEW

Problems of economic stabilization have been so prominent in the minds of economists and of the public at large for the past three decades that a beginning economics student just completing a course in macroeconomics, might be excused if he thought macroeconomics and stabilization economics were one and the same thing The chapters preceding this one have introduced you to many of the issues and much of the analysis concerned with the two problems that are emphasized above all others when macroeconomic policy is discussed maintenance of full employment and a stable price level.

Further it might be said that the stabilization objective is the father of modern macroeconomics Most macroeconomic thinking today is carried on in a framework of and employs key relationships originally developed or emphasized in Keynesian stabilization economics.

But stabilization economics is today only part of the whole field of macroeconomics which deals with levels attained by such aggregates as total employment and unemployment investment and savings, the price level and total income and product These aggregates are on the whole as important to the study of economic growth as they are to the analysis of instability In this chapter you will review some of the applications of macroeconomic thinking to the broad question of economic growth

The Major Questions

Before the demands for accelerated growth can be examined and before the growth process itself can be analyzed the need to define growth ' poses a familiar question As far back as Chapter 2 you saw that in macroeconomics the principal members of the cast of characters are what economists call aggregates income employment saving capital labor and the like None of these is a homogeneous grouping and certain problems arise when you treat them—as you must—as homogeneous Such a problem arose in discussing the level of economic activity there is no such thing as a change in the level of economic activity but only a joint change at about the same time of such quantities as the level of unemployment the size of GNP and the average number of hours worked weekly In analyzing the level of economic activity this problem was not too serious But it became quite troublesome when the subject was the more abstract concept of the price level In measuring changes in the price level you are forced to attempt to measure the change in size of something that itself changes in form as it grows Precisely the same problem arises when attention turns to economic growth

In examining the issue of the price level it was necessary to ask Why the concern? The same question is appropriate for growth There is strong clamoring in some quarters for government action to accelerate the rate of development of the American economy There are equally strong voices coming from other quarters that deny the need and/or desirability of such actions.

Probably the most important question to ask is *How* does an economy grow? Some consider this the most important question facing economists today Despite major advances made in the past few years in the theory of economic growth this question is still in large part an unresolved one There are two main reasons economists have found it difficult to develop a general theory of economic growth

In the first place growth unlike recessions inflation and most other phenomena studied in economics must be analyzed as a long term phenomenon The very process of growth or even simply the passage of time is likely to alter the basic relationships upon which any economic theory must be based These relationships are much more likely to change over a twenty or thirty year growth period than during an eighteen month recession

And in the second place much of the process of growth is non economic. Or putting it another way economic development is only part of a broader subject called social development. To predict growth it might be necessary to predict rates of urbanization and suburbanization changes in population growth rates willingness of people to accept new ways of doing things and even such things as the international political situation Growth takes place in the midst of changing religious beliefs family systems and medical progress. Many of the things that must be known to understand the process of economic growth lie outside the realm of competence of economists some of the things that must be known are outside the realm of anyone s competence today

So this chapter will not attempt to present an ambitious theory of growth It will only point (in section III) to some of the things that must happen if growth is to take place, noting the problems these processes can create

In Chapters 12 and 18, you saw that there were limits to the applicability of macroeconomic reasoning to the problems of unemployment and inflation Not all problems of instability arise from over or undercreation of financial instruments relative to the people's willingness to acquire them at full employment. Some stability problems are "structural" In this chapter you will once again see that there are limits to the applicability of macroeconomic analysis This is not to say that there is one kind of growth associated with intersectoral financial relationships and another kind associated with structural changes Aggregative relationships are always involved, and there are always structural changes, as an economy grows Thus this last chapter goes farther than any other in introducing structural analysis alongside the macroeconomic reasoning that has been developed throughout the text To the student who will go on to study problems of structure and composition in an introductory course in microeconomic analysis, this chapter offers something of a prelude to things to come

And while there is no such thing as growth in the aggregate sense without structural changes, it is possible to distinguish between aggregative and structural *problems* that may *hinder* or *retard* growth

In the last section this chapter will deal with some of the major issues and policy questions that arise when people want to accelerate the American growth rate As you will see, many of these issues involve the question of the compatibility of rapid growth and stability This is a controversial topic, not in the same sense that aid to education or loyalty oaths or farm price supports are controversial topics, but in the sense that there is no uniformity of belief among economists and policy practitioners on such issues as whether rapid growth helps maintain stability, or inevitably brings with it unemployment or inflation, or whether full employment or unemployment, deflation, inflation or stable prices, encourage growth The topic of stability and growth, it might also be noted, is one that many economists are finding the most exciting and challenging today, so considerable research and theoretical inquiry are under way[1]

The question of stability and growth is not the only major issue arising out of the advocacy of accelerated growth As with price stability, you will find that while many people endorse the objective of more rapid growth in principle they may be unwilling to accept programs necessary for attaining the objective

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[1] It also deserves note that in the area of the still open question of the relationship between stability and growth the lack of agreement among economists has attracted the usual number of pitchmen. The student is advised to discount the admonitions of unions that low wages retard growth of manufacturers' associations that high wages retard growth, of tariff protected industries that foreign competition retards growth of the economic right wing that government spending retards growth etc., not because these views are necessarily false (there are so many of them that some of them must be true, if the law of averages holds), but because they reflect the biases of self interested or ideologically committed groups that often cannot believe that what might be good for them may not be good for the nation as a whole

Much of what will be said in this chapter is equally applicable to advanced economies such as in the United States, Germany and Great Britain and to underdeveloped economies such as in Chile Haiti and India, but by and large the discussion is framed specifically in terms of the advanced economy not the underdeveloped economy There are several special problems associated with economic development in the underdeveloped areas and these cannot be treated at this time

I WHAT IS ECONOMIC GROWTH?

Economic growth seems to be a simple enough concept total product increases But it is not really simple to define or to measure in a completely satisfactory way It presents some of the same problems in concept and measurement that were presented in an earlier chapter by inflation Inflation, you will recall, is defined as an increase in the *average* price level The prices of some products rise, others fall others remain the same but the increases in price of some products are so great that they are not fully offset by the price reductions for others Substitute the world 'quantity" for "price" in the preceding sentence and you will have a fairly accurate description of growth, which is in a sense also an "average" kind of process It is not necessary for the quantities of all products to increase in order to have growth, it is only necessary that the decline in quantity of some products be more than offset by increases in quantity of others

The problem of defining inflation and of measuring it is greatly complicated by changes in the composition of total product, and especially by the introduction of new products The same is true of the problems of defining and measuring economic growth Imagine a small economy that in 1900 had fifty horses, and now has no horses but has eight tractors, one automobile, and one truck. Has the capital of this economy grown? And, if so, at what rate?

If your immediate reaction is to ask the prices of these products, so you can determine whether total capital in dollar terms went up or down, and by how much, you should think again Economic growth is independent of prices and of price levels Even if the fifty horses had precisely the same total dollar value as the modern mechanical equipment, you could not say whether growth had taken place, unless you were willing to venture your opinion on whether the buyers were getting more for their money today, or less Your opinion in that case would amount to the same as a guess as to whether growth had taken place[2] Without changes in the composition of total product, price changes would be much easier to measure Without *changes in price levels and in the structure of prices*, changes in total product would be much easier to measure But these changes occur simultaneously; and in fact changes in price structure and composition of total product are *the very essense of economic growth*

In the recent political debates about the American growth rate, growth was measured simply in terms of percentage increase in GNP Some times growth in GNP was measured in "real' terms (that is, adjusted for price level changes), sometimes price level increases were left in, to pad the growth rate[3] When growth is measured in unadjusted terms ("current dollars"), the measure is a false one, when GNP growth is measured in real terms (' constant dollars"), the measure of growth is only crude Despite the fact that percentage gain in GNP in constant dollars is the most widely used in international comparisons, it has several drawbacks For one thing, most countries find some fraction of their growth in total product used to provide for population increase There are even some countries whose rate of growth in GNP is slightly less than their rate of population expansion Economists have found it useful, then, to adjust GNP figures not only for price changes but for population changes The most common measure is *per capita income* in constant dollars, or the total product or income divided by the population Over the decade 1950–1959, the gross national product of the United States (in constant dollars) increased at an average annual rate of 3 3 per cent *Per capital income, however, increased at the same time* by an average annual rate of only 1 6 percent

Even adjusting for price level and population changes, some problems of definition remain As will be recalled from Chapter 6, some kinds of activity are excluded from measurement in GNP, including all nonfarm "do it yourself" work Should these activities properly be included or excluded in measuring growth? There are other exclusions that raise questions No one measures leisure time as a product yet increased leisure time is one of the benefits of improved technology and greater output capacity An economy may have the option of more consumer product or more leisure time the former is counted in measuring economic growth the latter not.

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[2] Here is an even trickier example Suppose that in 1900 there were fifty horses selling at $200 each for a total value of $10 000 Today say that there are eight tractors at $2000 each, for $16,000, one automobile at $2600, one truck at $3000, and one horse at $400 The whole package today is worth $22 000 With*out knowing what guesses have been made on price level* changes you might reason that in today's dollars, a horse is worth $400, so that the whole $22 000 package is equivalent to fifty four horses You would conclude that growth had taken place, equivalent to four horses or 8 percent You would be wrong A horse has quite different economic meanings and quite different values in an economy in which there are cars trucks and tractors and in one in which there are none Not only do products change, and new products appear, but because the uses of *existing products change, you cannot ever assume that a horse in 1900* is the same as a horse in 1965

[3] One prominent politician even went so far as to brag about *the growth* rate for *one year!* Clearly growth must be measured over longer periods of time to be meaningful to avoid measuring the business cycle instead of the long term rate of expansion of the economy This politician chose for his initial year a year of recession and for his terminal year a year of recovery Needless to say, the *resulting growth rate was phenomenal*

Others would like to exclude from growth measures some product that is included in GNP A measure of growth often referred to is nonmilitary per capita income The idea behind this measure is that military expenditure is not "really" part of total product in that it does not satisfy consumer desires nor does it increase output capacity It is only a burden on the economy This concept mixes ethical judgments with technical ones Growth of the economy in terms of output income and employment is one matter, how this capacity is employed is another

Some push this faulty concept to the absurdity of insisting that the entire public sector be excluded in measuring growth One organization regards the private sector as the only income creator in the economy the public sector, they argue, does not create income but exists only by taxing the private sector Hence only the private sector, they assert, should be included when growth is measured

The conclusion, of course, is that the appropriate measure of economic growth will vary, depending on why a measure is wanted For some purposes, the rate of increase of real GNP will suffice For other purposes, real per capita income growth is the relevant statistic. This data is available for many countries, as is data on rate of growth of the stock of capital goods, rate of growth of per capita disposable income, and several other measures, some of which are particularly appropriate to welfare comparisons, such as literacy rate, per capita consumption, population density per square mile, and the like

II WHY THE CONCERN ABOUT GROWTH?

In recent years economic growth has become a leading issue in the United States Reports from respected groups, such as the Rockefeller Brothers Foundation and the President's Commission on National Goals, have expressed dissatisfaction with the American economy's current rate of expansion The rate of growth has become important politically

This wide concern is most likely a consequence of two situations confronting the United States The first is that the United States has in the last few years been experiencing a growth rate somewhat smaller than has been customary in this century The second is that other countries, some of them political allies and others political rivals, have increased their rate of growth recently until they far exceed that of the United States If present growth rates continue, the GNP of the United States will double every twenty years (or a little bit longer), while that of the Soviet Union will double every decade, according to statistics most economists believe to be reliable Not only are some Communist countries growing at more rapid rates than the United States, Germany and Japan, whose economies are based on private ownership, have been growing in the last decade at a rate that exceeds even that of the USSR The only major developed country growing more slowly than the United States is Great Britain

Those who emphasize the problem of growth argue that our economy must continue to grow at a rapid rate in order to pay for the rising costs of armaments and other kinds of Cold War weapons, including foreign aid and the exploration of outer space, without undue sacrifice in our level of living They also note that a more rapid rate of growth in the USSR might influence presently uncommitted nations anxious for development to copy the Soviet system and to ally themselves with the USSR politically

Others, of course, want economic growth accelerated for reasons having nothing to do with the Cold War They want the benefits that come with development better housing, more and better education, medical progress, more leisure time, the eradication of poverty.

But economic growth is not costless A more rapid rate of growth may mean serious hardship for some people As a matter of fact, a greater total product might be achieved almost overnight simply by increasing the regular work week to fifty hours, but the people show little disposition to buy growth at this price Rapid economic growth may also be at the expense of economic stability

There are two main arguments offered *against* an accelerated rate of growth, by two quite different groups of people

1 One group regards as "natural" whatever rate of growth results from the voluntary employment, spending, saving, and investing decisions of the people, without government "tampering" They do not approve of any kind of program to accelerate growth rates, believing the maintenance of a laissez faire economic system to be a more desirable goal than more rapid economic expansion They regard the voluntary decisions of scattered consumers, workers, and businessmen to be an accurate reflection of the people's views on how fast the economy should grow

2. The other group believes that the United States has reached the status of an "affluent society," and that extra product would be of only marginal benefit to the people They identify increased output with the proliferation of frivolous consumer product such as automobile tailfins and electric swizzle sticks The major spokesman for this group is economist John Kenneth Galbraith,[4] who claims that there is no preexistent demand

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[4] See his best seller, *The Affluent Society* (Cambridge Mass Houghton Mifflin Company, 1959).

for more consumer product and that demand must be created through marketing methods

Galbraith regards other objectives as more important than growth Like many others, he regards the composition of total product as more important than its size, and would push for more *collectively taken* product such as schools, parks, and libraries A similar argument (but representing a viewpoint not shared by Galbraith) is that the size of the nation's income is less important than its distribution and that a more equal income distribution has a higher priority than more rapid growth

III SOURCES OF GROWTH

Despite the many ways in which growth can be measured for purposes of discussing how it is that economic expansion takes place, only two concepts of growth will be used increase in total product in constant dollars and increase in product per capita in constant dollars These concepts of growth may not satisfy those who are more concerned with the growth in certain sectors (for example private sector, military, capital formation, and the like) than with growth in the aggregate, however, since we are concerned here with the aggregate view of economic growth, the analysis cannot apply to sectoral changes

It is fairly simple to set forth the basic requirements for growth in total product There must be an increase in productive services contributed —that is, an increase in labor services and/or real capital goods,[5] and/or there must be increases in the *productivity* of labor and/or capital goods "Productivity" refers to the output *per unit* of service, not the total output One measure of productivity, for instance, is output per man hour Another is output per acre Another is output per machine hour

Increases in the Quantity of Services

Increases in the quantity of services, as noted, take place when the people contribute more labor services, and/or when the economy as a whole accumulates more real capital goods The accumulation of capital goods, referred to most often as "capital formation" or "capital accumulation," is regarded as a far more important source of growth than increases in the quantity of labor services To see why let us review each of these briefly

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[5] Note that it does not say "an increase in labor services and/or *ownership services*" Ownership services refer to the ownership of financial instruments, i e, to financial saving in the economy The idea of ownership services is a very useful one when analyzing relationships among the four sectors—the people, business government, and the rest of the world These financial relationships are most significant for questions of stability Here the concern is with productive resources i e, with real capital, real savings, real investments There is a difference between the two concepts. Government deficits for instance create financial capital without creating real capital Government construction of highways dams, etc., can create real capital without creating financial capital The difference between the 'real' and "financial' side of saving, investment, and capital is first brought up in Chapter 5

LABOR SERVICES Increases in population it might be thought would automatically lead to *increases in labor services rendered* thus making population growth an important contributor to economic development But you will note right away that such increases in total product would not result in increased *per capita* total product Moreover increases in population may or may not actually result in increases in labor services offered

The total amount of labor services offered is of course greatly influenced by the size of a nation s population But other factors also have great influence on the amount of labor services offered

1 The proportion of the population in the labor force Two societies both with populations of 100 million will differ economically quite markedly if one has 35 percent of its population in the labor force and another has 60 percent of its population in the labor force The proportion of the population in the labor force depends on several variables If there is an extremely long life span as in the United States the larger number of older retired persons will reduce the proportion, so will an emphasis on longer years of education In some underdeveloped countries, in which average life expectancy is short (in south Asia quite generally less than forty years at birth) the fact that so many children die before they reach the ages of ten or twelve increases the proport on of children in the population and also reduces the proportion of the population in the labor force In the United States roughly 75 million are considered to be in the labor force, in a population of over 190 million The proportion was considerably higher during World War II, when a larger percentage of women were employed and fewer young men were in school

2 The average number of hours worked weekly Clearly the larger the average number of hours worked the more labor services are offered by a given labor force One way of increasing total product and total product per capita would be to increase the average number of hours worked However historical evidence suggests that as economic and social development occurs in a society the average number of hours worked tends to decline[6] This may not be universally true however, in many underdeveloped countries the best educated persons are often members of a leisure class which traditionally abhors work and even the very poor often wish to work only enough to satisfy subsistence needs Many students of economic development believe that the social changes accompanying economic development will reinforce motives to work so that in such societies

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[6] A decline in the number of hours worked tends to result in a decline in *measured* growth of real gross nat onal product However some might prefer to regard increased leisure as *part* of econom c growth as one of the benefits obtainable from an increased ability to produce measurable products

both the proportion of the population in the labor force and the average number of hours worked weekly may increase as income rises

Putting the proportion of the population in the labor force together with the average number of hours worked weekly by those in the labor force, we have a ratio which might be called the *per capita contribution of labor services* Growth in total product can take place, to summarize, if population and/or per capita contribution of labor services increases Since population growth cannot bring increases in per capita total product and since there is no clear evidence that per capita contribution of labor services tends to increase in a developing economy (although reductions are partly offset by the increasing proportion of women in the labor force), we cannot expect increases in labor services to contribute much to economic growth

CAPITAL ACCUMULATION Real investment, you will recall is the addition to the economy's stock of productive facilities and inventories owned individually or collectively, and is equal to the sum of all past real (net) investment

The expansion of inventories may have some importance for economic growth Certainly there must be some increase in inventories as the quantity of product created and sold increases But productive facilities, not inventories, are of greatest importance in the process of capital accumulation for economic growth

"Productive facilities" refers to factories, office buildings residences, courthouses, and other buildings, to machines, furniture, fixtures, and other equipment, and to *social overhead capital* This last category consists of facilities whose operation may or may not bring direct revenue sufficient to pay for the facilities but which themselves provide the economic and social foundation for economically profitable investment Examples of social overhead capital are highways and other transportation facilities, libraries, schools, and other facilities for education and training, police and fire protection facilities and equipment, dams for flood control

All types of capital mentioned above are included whenever statisticians estimate the size (or change in size) of a nation's stock of capital goods But there is a growing belief that counting only such tangible capital goods may result in ignoring one of a nation's most important assets "human capital" Theodore Schultz and the other economists who advance the concept of human capital[7] have in mind the use of resources to improve the productive capacity of persons, whether through education or otherwise While school construction is now treated as investment, education is regarded as a consumption good Ignoring the investment aspect of education and training, Schultz holds, can result in an understatement of the econ omy's productive assets, an overstatement of its consumption, and perhaps in bad planning

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[7] See Schultz's speech as retiring president of the American Economic Association 'Investment in Human Capital,' in *American Economic Review*, (March 1961), pp 1-17, and his 'Human Capital A Growing Asset," *Saturday Review* (January 21, 1961) pp 37-39

In practice it is difficult, perhaps impossible, to separate the consumer product in education from the investment product Much that is learned in school—including the "three R's"—*is essential to both enjoyment of life* and to individual productivity None of the data available on the capital of economies include estimates of human capital.

The accumulation of real capital requires real saving by the economy as a whole—that is, use of currently created product for purposes other than *consumption This is true of all kinds of real capital—inventories, produc*tive facilities social overhead capital, and even human capital Capital accumulation is very significant in economic growth Studies indicate that about half of the per capita economic growth in the United States since the turn of the century is due to increases in capital (not counting human capital, which is responsible for a good share of the other half)

Economists have found it useful to refer to a nation's ***capital output ratio,*** *which is the ratio of an economy's stock of real capital goods to its* current level of output of product, and is hence a measure of the average productivity of capital If a nation had a real capital stock valued at $450 billion, and if its total product (net national product) were $100 billion, the capital output ratio would have a value of 4½ 1

Capital output ratios will vary from country to country, within a range of 3 1 for an extremely efficient economy to 5 1 for an extremely inefficient one Because capital-output ratios seem to be fairly stable over long periods of time they are useful in making predictions regarding the level of economic growth

For instance, suppose a country invests 10 percent of its total product each year in real capital, holding consumption (including military and other government consumption expenditures) to 90 percent Suppose that this nation has a 4 1 capital output ratio Each year the total capital of this nation will increase by an amount equal to *10 percent of total product*, since on the average $1 of output requires $4 of capital, the new capital will result in an increase in total output of one fourth of 10 percent of total product, or 2½ percent This is an average figure, of course, since not all capital goods are the same with respect to productivity But such a nation can expect its growth in total product to hover around the 2½ percent per year mark, other things being equal Assuming that other things do remain equal, *an economy's average growth rate should be roughly equal to the* capital output ratio divided into the percentage of total product devoted to capital formation This reasoning will suggest that a country that wants to increase income by 4 percent per year and has a capital output ratio of 4½ 1, will have to invest 18 percent of its total product in capital formation

These figures should indicate how hard it would be for an economy to increase its growth rate by 1 percent With a 4 1 capital output ratio, an increase in the growth rate of 1 percent requires an increase of 4 percent in the part of total product devoted to investment—quite an increase for any economy

Calculations such as these also help account for some of the pessimism regarding the development potential of many underdeveloped countries These countries frequently have capital output ratios higher than those of advanced countries often over 4 1 and save and invest (in real terms) much less than advanced countries frequently less than 10 percent of total product Yet many of these countries prepare development plans calling for 4 percent or 5 percent rates of annual growth A nation with a high capital output ratio a low investment ratio and a rate of population growth of 2½ percent to 3 percent per year is likely to stand still or even retrogress in terms of per capita income

In these underdeveloped countries attention has focused on raising the percentage of income saved and invested (which is difficult to do because of the low levels of income in these countries) or importing capital through foreign investment and aid programs[8]

The only other alternative for such underdeveloped countries is to lower the capital output ratio, which brings us to the next topic

Increases in the Productivity of Services

Technological change is almost certainly one of the most important phenomena in all of economics, having much to do with the growth in total product with changes in the composition of total product, and with major economic adjustment problems Yet it remains one of the least understood, hard to get hold of topics studied by economists Technological change resulting in increases in the productivity of services, stands together with capital accumulation to constitute the two main sources of economic growth These increases in productivity come about in many ways

Often capital formation itself means an increase in productivity This is especially true when "new ways of doing things" involve increased efficiency through use of machinery and other capital goods in place of other resources The industrial revolution is a case of greatly increased productivity resulting from mechanization of manufacture Today major gains are made in efficiency through use of more capital in agriculture in commerce and finance and many other fields than manufacturing

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[8] It should be noted that all the above calculations employing capital output ratios and investment ratios are based on the assumptions that the capital output ratio does not change that the capital output ratio for *new* capital goods is the same as for the existing capital stock and that other important changes in the economy do not take place Since these are not always very realistic assumptions, calculations such as these have a wide margin of error They are, nevertheless, a useful tool of analysis especially for long term problems

When new machines replace old through the process of depreciation and the new are more efficient there is an increase in productivity without new capital formation To be more efficient a machine or other capital good *may produce more units per hour require less labor for supervision* and operation or less electricity or fuel Or it simply may be more durable

There are sources of technological improvement having nothing to do with machines or other capital Reorganization of a production group or a production process may greatly increase efficiency The discovery or invention of new ingredients such as synthetic fibers can reduce the costs of doing the same things

Obviously improvements in productivity contribute to economic *growth In the terms used earlier in this chapter they tend to lower the* capital-output ratio (and the labor output ratio as well) But they make their contribution to economic growth in a highly complex way and unless due care is taken can create serious problems of adjustment We will have to leave to an introductory course in microeconomics the task of analyzing the nature of the complexities Here it is only possible to suggest their nature

One important fact is that an improvement in one industry may lead to increases in output in that industry—or in one or more *other* industries One major question in microeconomics is how an economy decides to take the benefits of its improvements in technology Historically the best *example is agriculture Through the centuries major improvements have been* made in methods of raising animals and food and fiber crops At one time virtually everyone had to be a farmer in order to survive today one American farmer can feed more than twenty other persons allowing the rest of the labor force to produce other products Increases in productivity in agriculture typically do not lead to very significant increases in the amount of food people eat and the amount of clothes they wear they lead instead to greater output in industries with little or no technological improvement

The same can happen of course when there are improved methods of production in any industry agricultural or otherwise Thus the proceeds of economic growth through technological change requires the continuous *movement of resources out of some industries into others How this movement* takes place cannot be discussed here It must be noted however that this movement of resources even though it accompanies economic growth that is thought to be desirable is accompanied by other phenomena of shorter run significance that are thought to be undesirable high rates of business failure high rates of technological unemployment and the existence of such special problems as the farm problem depressed areas and high welfare costs in such cities as New York Chicago and Los Angeles

Faster rates of technological change while resulting in more rapid rates of growth will tend to aggravate such problems increasing the rates of business failure creating more technological unemployment and more distressed areas

So rapid economic growth is not costless You have seen that it may require the lower levels of current consumption that will allow more rapid capital formation and that it is quite likely to bring the difficult hardships attendant upon rapid technological change And there are conceivably other costs so that a number of issues and problems surround the question of growth policy

IV GROWTH POLICY SOME MAJOR ISSUES

Growth policy is not a closed issue even for those who arguing from the laissez faire point of view oppose any government intervention to accelerate the American growth rate for even these people can and do argue that the nation s expansion can be unnaturally low because of unnecessary obstacles to growth Both they and at the other extreme those who advocate active government programs to raise American growth rates to levels approaching those achieved by Germany and the USSR must face serious and potentially divisive policy issues

Because the growth process is imperfectly understood most attention must be given to two types of policies those intended to remove apparent *obstacles* to more rapid growth and those intended to deal with some of the more burdensome by products of faster growth Four major issues will be examined the aggregate explanation for chronic "slack in an economy with the policies implied the issues and policies raised by the possibility that lagging growth rates are the result of inadequate investment by business, the question of the relative size of the public and private sectors of the economy and the opportunities created and problems posed by technological change

Chronic "Slack"—the Aggregate Explanation

One possible explanation for a lagging growth rate does not distinguish between inadequate growth and recession conditions The amount of product taken and the amount of product created increase every year but not by enough to match increases in productivity and in the size of the labor force There is not only inadequate growth, there is inadequate employment although unemployment may not rise to recession ' levels

Why should there be such chronic slack' in an economy? One possible answer is suggested by the growth and instability theories of Sir Roy Harrod and Professor Evsey Domar *concentrate on one job creating the required amount of new productive* facilities Whenever creation of the needed new capital does not satisfy the propensity to save, the government makes up the difference by having a deficit If capital requirements should imply a rate of investment that exceeds the amount the people want to save at full employment, the appropriate government policy is a surplus

If there is chronic 'slack,' it may be necessary for the government to run budget deficits year *after* year and for the public debt to increase indefinitely

In summary then lagging growth resulting from the chronic failure of investment to satisfy the propensity to save may require chronic deficits *in the federal budget An expansional financial policy, involving low interest* rates may help But it has been found that exclusive reliance cannot be placed on financial policy for expansional purposes A major problem arises because many people who want a more rapid rate of growth to be achieved and maintained are unwilling for reasons discussed in Chapter 16 to accept a more rapid rate of increase in the public debt

Inadequate Investment

In an economy not judged to be plagued by chronic "slack" there may still be a problem of inadequate investment The larger the share of each year's output devoted to consumption goods both individual and collective, and the smaller the share devoted to increasing the real capital of the economy, the lower will be the long term rate of growth of the economy The policy problem posed by "inadequate" investment is not simply how to increase the annual rate of real capital formation, it is to increase the rate or capital formation *and* reduce consumption correspondingly.

If a lagging growth rate is thought to be a consequence of inadequate investment it is often proposed that a high rate of investment be encouraged through "easy money," that is, through interest rates held at low levels through monetary policy If such a policy tended to be inflationary because it induced an overcreation of financial instruments relative to the full employment propensity to save, it would be combined with budget surpluses The combined effect of low interest rates and surplus budgets, goes the argument, would be to increase the percentage of total product going to investment, and decrease that going to consumption

Monetary policy, in short, would not be used at all for stabilization purposes Its sole objective would be to encourage the maintenance of a high growth rate through high levels of capital formation The job of maintaining stability would be left to fiscal policy.

Beside the obvious political difficulties involved in raising taxes to used to pay current expenses, is not taxable) is overestimated, profits (which are taxable) will be underestimated, and too little tax will be paid

But if the tax laws require firms to *under*estimate depreciation, the firms' reported profits will be greater, and their taxes will also be greater, thus reducing their motives to invest In effect, the firms would be being taxed on part of their depreciation as well as on their profits Hence it may be necessary, in order to encourage a more rapid rate of growth, to change the tax regulations governing depreciation And other changes in the tax *structure*—as distinguished from the level of taxes—may be required wherever it is found that tax laws needlessly hinder sound investment

Removing restraints on investment is not the same as trying to spur investment through low interest rate policies or similar programs Policies that aim at encouraging investment must concomitantly contain methods to cut down on the amount of product taken by the people But if the people take less product businesses may actually not undertake more investment because the market for final product may be diminished If some investment that *would have* been undertaken to exploit *already* existing markets for final product is discouraged by tax laws or other legal restrictions, removal of such barriers does not involve the same dilemma

Public Sector versus Private Sector

There may be growth retarding problems relating, as noted, to the division of total product between investment and noninvestment products, that is, to the rate of capital formation Another composition problem relates to the division of total product between product taken collectively (that is, through government—the "public sector") and product taken individually and by business (the "private sector") Specifically, the division of total *product between private and public sectors that may be required for accelerated economic growth* may not be the division generally acceptable to the public

This difficulty can work in two directions

First, it is possible that the public might want too much collectively taken product It is possible that public demands for government expenditures for security, recreation, and other welfare objectives may be at the expense of capital formation, cutting down on the rate of growth of the private sector and of the economy in the aggregate Except in thoroughly Socialist states, major reliance for capital formation must be placed on spontaneous and unplanned decisions made by widely dispersed administrators of individual businesses

The type of economy in which the public is likely to demand too much collectively taken product, and a public sector that, is uneconomically large, is one in which there is something of an ideological preference for the public as opposed to the private sector. This type of preference has often been observed in many of the underdeveloped nations of Asia and Africa In these poor countries the relative size of the public sector may be smaller than *in the United States, but expansion of the public sector is given the* benefit of the doubt, while expansion of the private sector is often viewed with suspicion Moreover, there is a good deal of political pressure in many such nations for welfare programs comparable to those found in advanced Western economies, despite the fact that at similar stages of development the *Western nations had no such programs*

In the United States, where there is strong resistance to a major role for government in the economy and where it is the expansion of the private sector that has the benefit of the doubt, it is more likely that the public will be unwilling to accept through political decision making processes *the high levels of collective product taking that may be necessary for accelerating* economic growth

Specifically, the types of products required to increase economic growth may not be the types that can be purchased individually They may take the form of *social overhead capital* (see the discussion of capital, *above*), *consisting of types of investment that do not bring money profits* (and hence are not undertaken privately) but that lay the groundwork for profitable investment Common examples are transportation and communications systems new power sources such as atomic energy, and the one most frequently mentioned today, education

In the United States the problem of gaining public acceptance for expansion of social overhead capital has often been approached in ways that conceal or disguise the nature of the expansion Sometimes the projects are undertaken in the name of national security Federal programs for expansion of higher education facilities, for instance, are provided for by the 'National *Defense Education Act," and a major highway construction* program will create the "Interstate and Defense Highway System" The expansion of the public sector reflected in the highway program is further concealed by the way it is financed by a trust fund arrangement that keeps tax receipts and expenditures out of the federal administrative budget. *Students of American history know that there is nothing new* about *federal* encouragement of expansion of social overhead capital in ways not reflected in the budget The building of roads, canals, railroads, and state universities were all encouraged by federal subsidies taking the form of grants of public lands to private interests and to the states

Technological Change

A major source of growth is technological change which increases the output of any given amount of services *Government policy may become* involved in a number of ways in attempts to promote technological change First, the government may conduct or sponsor research, as it does to a great extent in defense related electronics fields today Even if the research so sponsored is directed toward military security goals there is a good deal of benefit in nonmilitary industry (jet airplanes atomic powered generators transistors and laser rays provide dramatic illustrations) Much nondefense research and experimentation accounting for the major strides in American *agricultural technology were conducted directly by or under* the egis of the U S Department of Agriculture Second government may act to break down institutional barriers to the application of new technology in industry barriers often symbolized by the term featherbedding Third government control and regulation of industry can be utilized in such a way as to rationalize and make more efficient the organization of existing industries in the early 1960s for instance the Comptroller of the Currency who supervises *federally* chartered commercial banks began a vigorous review of banking regulations to determine how the banking system might be streamlined

Despite the many ways in which government can conceivably encourage or at least avoid discouraging technological change the chief concern of government lies with the relationship between technology and stability As a practical matter the influence that government can have on invention experimentation and innovation is limited and is recognized as such But government must be concerned nonetheless for in the absence of contrary policies extremely rapid rates of technological change can create problems of unemployment and dislocation but have little impact on realized growth rates while fairly slow rates of technological change can create problems of rising price levels To understand how different rates of technological change can lead to different stability problems first examine an exaggerated example

Suppose there is an economy in which a third of the people are farmers and farm workers a third work in manufacturing (including processing) activities and a third are in education medicine and other service industry pursuits Then suppose that through a swift series of inventions and discoveries the number of people needed to produce existing quantities of agricultural and manufactured product is cut in half The economy has a choice It can have twice as much food and other agricultural product and twice as much manufactured product with no change in the way people are employed Or it can have more service industry products requiring people to be moved from one type of employment to another

Regardless of which alternative is taken (and it should be obvious that there is a large range of choices between the two extremes) the economy has a golden opportunity for growth If people want more food and manufacturing product this growth can come with little difficulty But if instead they want more education more banking services more symphony concerts more medical care and more of other services ' there will be problems Those employed in agriculture and manufacturing do not become college presidents or English teachers or second violinists or credit examiners or surgeons or medical technicians overnight.

Unfortunately, in actual cases of technological change, the public seems more frequently to want new and changed products rather than more of the same thing so that *it is often true that the way services are currently employed will not be appropriate to the production of the things people want to buy* Not only is growth retarded, but hardships result in the form of declining incomes technological unemployment business failures and the like And the more rapid the rate of technological progress, the more people are affected by such hardships One only has to point to the *rapid technological change on the farms and the farm problem*, *or the* changes in fuel uses and in coal mining technology, and the depressed coal mining industry or the growing popularity of synthetic fibers, and the depressed cotton textile industry to see some of the costs of rapid economic change Today the prospect of automation" threatens to extend problems *not only to production workers but to the once relatively secure unskilled and semiskilled clerical workers*

From the example it should be clear that the economy does not get its benefits from technological change in the form of income growth until those made unemployed by such change find new jobs If the people in the hypothetical economy do not want more food or manufactured product, they will get *no more of anything* until people leave the agriculture and manufacturing industries and find productive employment in the services industry So policies to do away with such technological unemployment are also policies to expand the rate of growth Two types of policies have been proposed

One is that deficit budgets by the federal government perhaps together with expansionary financial policies by the Federal Reserve, be used to increase the amount of product buyers try to buy, to speed the reabsorption of the resources made redundant by technological change Certainly chronic slack" in the economy would make it all the more difficult for those who are technologically unemployed to find new jobs, so a policy directed at maintaining full employment is important in speeding the readjustment process But some critics argue that to go beyond ordinary antirecession policy may be futile, saying that because of the limited skills of the technologically unemployed, and because of other bottlenecks, their reemployment would come at a slow pace even with buyers very actively trying to buy more product, and that such expansionary policies could even result in inflation similar to the sectoral inflation described in Chapters 18 and 19

The second type of policy proposed is of government programs to retrain and relocate the unemployed It is difficult to evaluate such programs, since the United States has so little experience with them, although ambitious programs in the European Common Market seem quite successful They are opposed by some for ideological reasons because of the degree of government intervention in the economy they involve

A third type of policy would deal with technological unemployment but not in ways calculated to accelerate growth by making the need to find new jobs less urgent An example is American farm policy which by maintaining farm incomes at levels higher than the free market would set them make it less necessary for those employed in agriculture to seek other jobs as rapidly as they might otherwise[10] Protective tariffs and other devices to insulate firms and employees from the forces of economic change also fall into this category

Alternatively if the rate of technological change is fairly slow price level rather than employment difficulties may ensue This possibility exists because of the relationship of prices rates of pay and productivity If rates of pay increase annually at the same pace as productivity increases in the economy as a whole the price level need not change The same quantity of services accounts for more production providers of these services can be paid correspondingly more without the necessity of raising prices on the average But if providers of services become accustomed (as it seems they have in the contemporary United States of America) to regular increases in rates of pay an absence of the required increase in productivity would imply price level increases Thus in the absence of contrary government policy a too slow rate of technological progress may mean cost inflation

It is hard to specify what contrary government policy might be If it is difficult to achieve consensus on appropriate policy to avoid inflation of the demand type it is even more difficult to gain general acceptance of means of controlling cost inflation since the former requires broad general restraints such as surplus budget fiscal policies and tight monetary policies while the latter may require direct government intervention in the pricing of products or the determination of rates of pay It is a matter of individual values whether such intervention or the inflation it is intended to prevent is the greater evil

Counting the Costs

For those who view them as such the possible costs involved in accelerating economic growth include chronic budget deficits tax structure revisions to favor business, government involvement in the retraining and relocation of workers, a larger (or in some cases smaller) share of total

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[10] This is not necessarily a criticism of American farm policy As a matter of fact resources continue to leave agriculture at a very rapid rate and it is an open question whether nonagricultural industry and urban society could absorb rural populations at a rate faster than the present one Chronic slack in employment opportunities in urban areas would make this rural to urban movement much more difficult

product taken collectively in the form of social overhead capital, and perhaps price level increases and technological unemployment

These are all *possible* costs There is no reason why all of them should accompany rapid economic growth although it seems almost certain that some of them will Moreover not everyone would consider each of them a cost Economists for instance do not view budget deficits with alarm

It is an imposing list nonetheless When all the possible costs are counted which do we choose *rapid growth with its attendant problems or moderate growth without them?*

You would be making a mistake if you believed that all problems could be avoided by accepting a moderate growth rate and abjuring the course of accelerated growth While rapid economic growth is not costless neither is a slow rate of growth Instability for instance can certainly result from a rate of growth that is too slow to absorb labor force increases and workers displaced by technology The hardships involved in making necessary adjustments attendant upon economic change must be compared *with the hardships—many of them in the future rather than the present—that would result from a smaller total product*

These future costs can include the persistence of poverty in our 'affluent society the failure to conquer cancer and other presently incurable diseases and even the loss of world leadership And they would include smaller total product for our grandchildren just as our total product today would be less had our grandparents avoided the sacrifices entailed in economic growth

This is not to suggest *that in all cases the decision will be made in favor of more rapid growth The hardships may be real and immediate* and the benefits distant and tenuous It is only to argue that a full assessment of the issue requires that future as well as present costs and burdens be taken into account

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